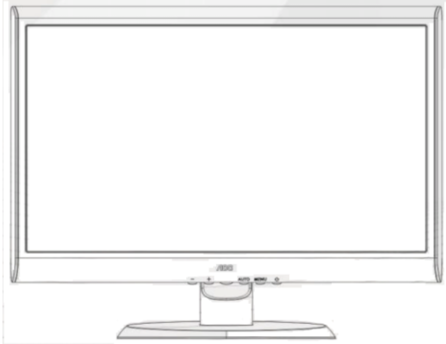
Service
Service
Service



ENERGY STAR

Service Manual

Horizontal Frequency
30 - 83kHz

Table of Contents

SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFOMER FOR THIS UNIT WHEN SERVICING

Revision List

Version	Release Date	Revision History	TPV Model Name
A00	Feb.-17-2013	Initial release	T9CMN26KAGACHNE
			T9CMN26MAGACHNE
			T9CMN26IAGACHNE
			T9CMN26VAGACHNE
			T9CMN26TAGACHNE
			T9CMN26XAGACHNE

Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all AOC Company Equipment. The service procedures recommended by AOC and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. AOC could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, AOC has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by AOC must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

Hereafter throughout this manual, AOC Company will be referred to as AOC.

WARNING

Use of substitute replacement parts, which do not have the same, specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from AOC. AOC assumes no liability, express or implied, arising out of any unauthorized modification of design.

Servicer assumes all liability.

FOR PRODUCTS CONTAINING LASER:

DANGER-Invisible laser radiation when open AVOID DIRECT EXPOSURE TO BEAM.

CAUTION-Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION -The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

Take care during handling the LCD module with backlight unit

-Must mount the module using mounting holes arranged in four corners.

-Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.

-Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.

-Protect the module from the ESD as it may damage the electronic circuit (C-MOS).

-Make certain that treatment person’s body is grounded through wristband.

-Do not leave the module in high temperature and in areas of high humidity for a long time.

-Avoid contact with water as it may a short circuit within the module.

-If the surface of panel becomes dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)

1.Monitor Specifications

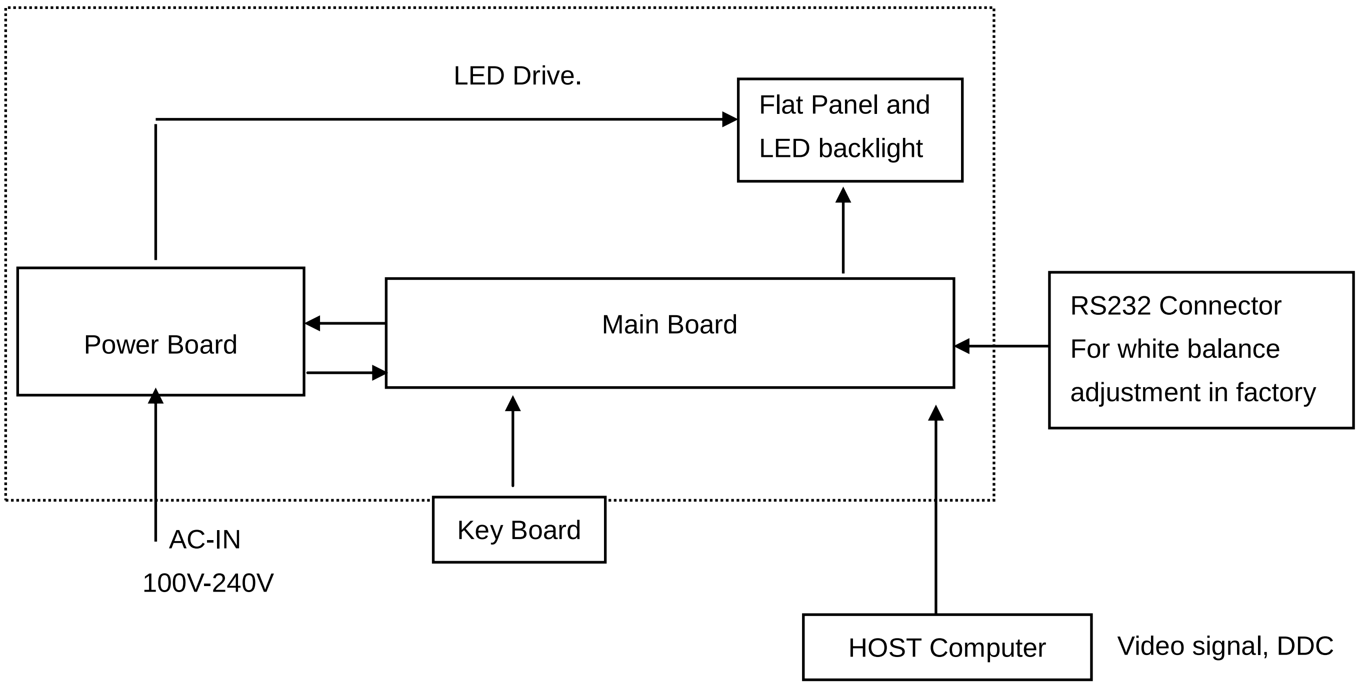
Panel	Model name	**E2050Sw/E2050Swd/E2050Swda**
	Driving system	TFT Color LCD
	Viewable Image Size	49.5cm diagonal
	Pixel pitch	0.27mm(H)X0.27mm(V)
	Video	R, G, B Analog Interface （**E2050Sw**）
	Video	R, G, B Analog Interface & Digital Interface
	Separate Sync.	H/V TTL
	Display Color	16.7M Colors
	Dot Clock	140 MHz
Resolution	Horizontal scan range	30 kHz - 83 kHz
	Horizontal scan Size(Maximum)	432.0mm
	Vertical scan range	50 Hz - 76 Hz
	Vertical scan Size(Maximum)	239.76mm
	Optimal preset resolution	1600x 900 (60 Hz)
	Plug & Play	VESA DDC2B、DDC/CI
	Input Connector	D-Sub 15pin（**E2050SW**）
	Input Connector	D-Sub 15pin, DVI 24pin
	Input Video Signal	Analog: 0.7Vp-p(standard), 75 OHM（**E2050SW**）
	Input Video Signal	Analog: 0.7Vp-p(standard), 75 OHM, TMDS
	Power Source	100-240V~, 50/60Hz
	Power Consumption	Active: 20 W (typical)
		Standby 0.5 W
	Off timer	0-24 hrs
	Speakers	2WX2(**E2050Swda**)
Physical Characteristics	Connector Type	15-pin Mini D-Sub （**E2050SW**）
	Connector Type	15-pin Mini D-Sub,DVI-D
	Signal Cable Type	Detachable
Environmental	Temperature:	
	Operating	0° to 40°
	Non-Operating	-25° to 55°
	Humidity:	
	Operating	10% to 85% (non-condensing)
	Non-Operating	5% to 93% (non-condensing)

2.LCD Monitor Description

The LCD monitor will contain a main board, a power board and a key board which house the flat panel control logic, brightness control logic and DDC.

The power part will provide AC to DC Inverter voltage to drive the backlight of panel and the main board chips each voltage.

Monitor Block Diagram



3. Operating Instructions

3.1 General Instructions

Press the power button to turn the monitor on or off. The other control knobs are located at front panel of the monitor (See Figure). By changing these settings, the picture can be adjusted to your personal preferences.

* The power cord should be connected.

* Press the power button to turn on the monitor. The power indicator will light up.

3.2 Control Buttons and Connections



1	ECO / DCR / Volume -
2	4:3 or Wide / Volume +
3	Source / Auto / Exit
4	Menu/Enter
5	Power

Power

Press the Power button to turn on/off the monitor.

Eco (DCR)/ -

Press the Eco key continuously to select the Eco mode of brightness and DCR on when there is no OSD. (Eco mode hot key may not be available in all models).

Volume

When there is no OSD, Press Volume button to active volume djustment bar, Press - or + to adjust volume(Only for the models with speakers)

4 : 3 or wide/+

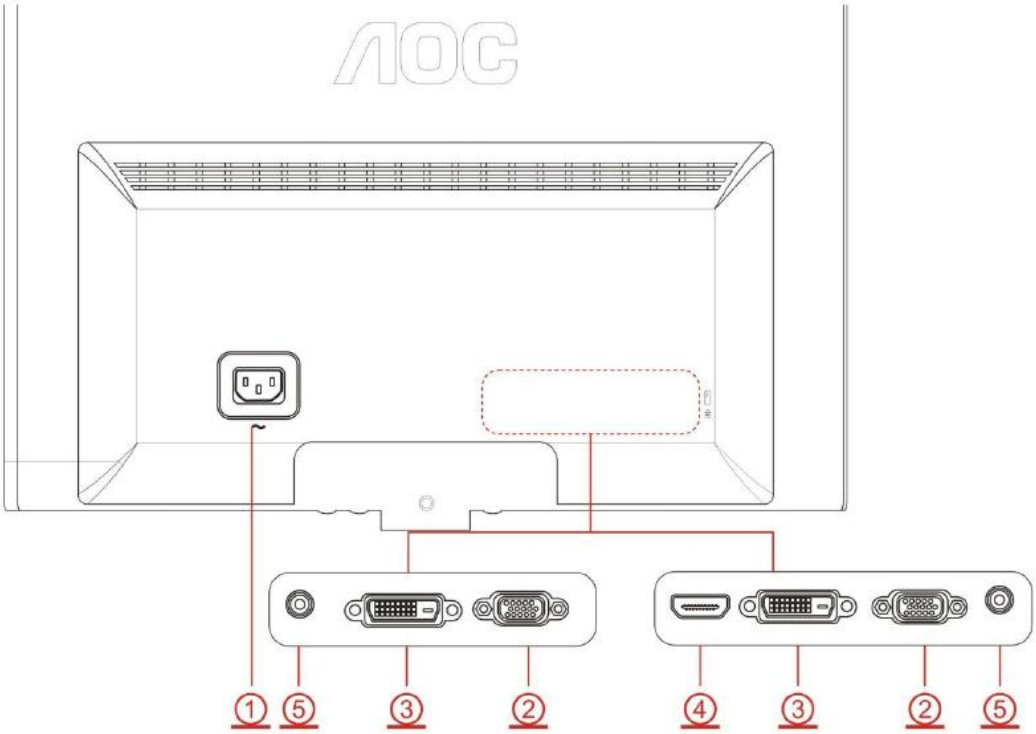
When there is no OSD, Press + continuously to change 4:3 or wide image ratio. (If the product screen size is 4:3 or input signal resolution is wide format, the hot key is disable to adjust.)

Auto / Exit

When there is no OSD, press Auto / Exit button continuously to do auto configure. (For the models with one input) When there is no OSD, press Auto / Exit button continuously about 3 second to do auto configure. (Only for the models with dual or more inputs)

Source hot key

When the OSD is closed, press Source button will be Source hot key function. Press Source button continuously to select the input source showed in the message bar , press Menu/Enter button to change to the source selected. (Only for the models with dual or more inputs).



1. AC port

2. VGA

3. DVI (available for selected models)

4. HDMI(available for selected models)

5. Audio(available for selected models)

To protect equipment, always turn off the PC and LCD monitor before connecting.

1. Connect the power cable to the AC port on the back of the monitor.

2. Connect one end of the 15-pin D-Sub cable to the back of the monitor and connect the other end to the computer's D-Sub port.

3. Optional –(Requires a video card with DVI port) - Connect one end of the DVI cable to the back of the monitor and connect the other end to the computer’s DVI port.

4. Optional –(Requires a video card with HDMI port) - Connect one end of the HDMI cable to the back of the monitor and connect the other end to the computer’s HDMI port.

5. Optional –(Requires a video card with Audio port) - Connect one end of the Audio cable to the back of the monitor and connect the other end to the computer’s Audio port..

6. Turn on your monitor and computer.

If your monitor displays an image, installation is complete. If it does not display an image, please refer Troubleshooting.

3.3 OSD Setting

Basic and simple instruction on the control keys.



1)Press the **MENU**-button to activate the OSD window.

2) Press **-** or + to navigate through the functions. Once the desired function is highlighted, press the **MENU**-button to activate it . press **-** or **+** to navigate through the sub-menu functions. Once the desired function is highlighted, press **MENU**-button to activate it.

3) Press **-** or **+** to change the settings of the selected function. Press **AUTO** to exit. If you want to adjust any other function, repeat steps 2-3.

4) OSD Lock Function: To lock the OSD, press and hold the **MENU** button while the monitor is off and then press **power** button to turn the monitor on. To un-lock the OSD **-** press and hold the **MENU** button while the monitor is off and then press **power** button to turn the monitor on.

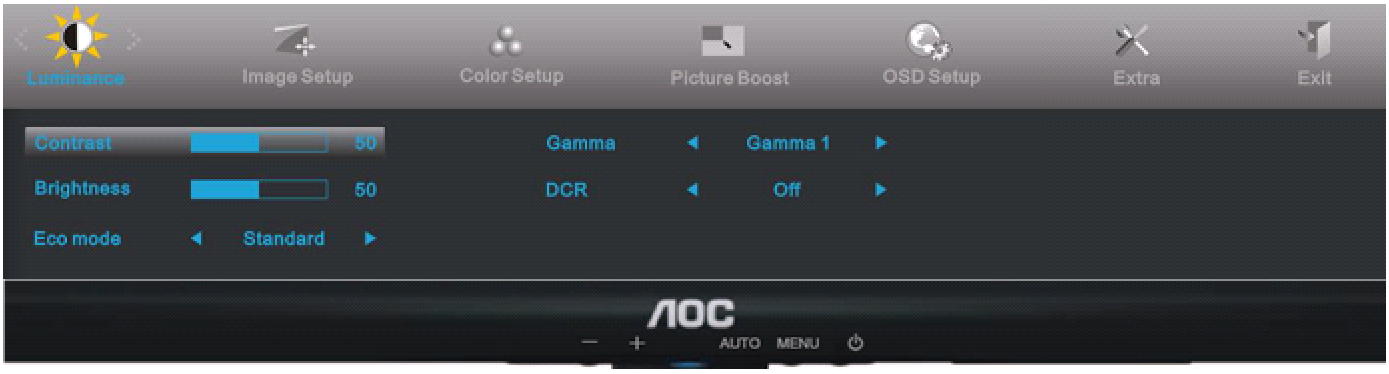
Notes:

1) If the product has only one signal input, the item of "Input Select" is disable to adjust.

2) If the product screen size is 4:3 or input signal resolution is wide format, the item of "Image Ratio" is disable to adjust.

3) One of DCR, Color Boost, and Picture Boost functions is active, the other two function is turned off accordingly.

Luminance



1 Press **MENU** (Menu) to display menu.

2 Press - or + to select  (Luminance), and press **MENU** to enter.

3 Press - or + to select submenu, and press **MENU** to enter.

4 Press - or + to adjust.

5 Press **AUTO** to exit.

	Brightness	0-100		Backlight Adjustment
	Contrast	0-100		Contrast from Digital-register.
	Eco mode	Standard		Standard Mode
		Text		Text Mode
		Internet		Internet Mode
		Game		Game Mode
		Movie		Movie Mode
		Sports		Sports Mode
	Gamma	Gamma1		Adjust to Gamma1
		Gamma2		Adjust to Gamma 2
		Gamma3		Adjust to Gamma 3
	DCR	Off		Disable dynamic contrast ratio
		On		Enable dynamic contrast ratio
	Overdrive (Optional)	Strong		Adjust the response time
		Medium		
		Weak		
		Off		

Image Setup



1 Press **MENU** (Menu) to display menu.

2 Press - or + to select  (Image Setup), and press **MENU** to enter.

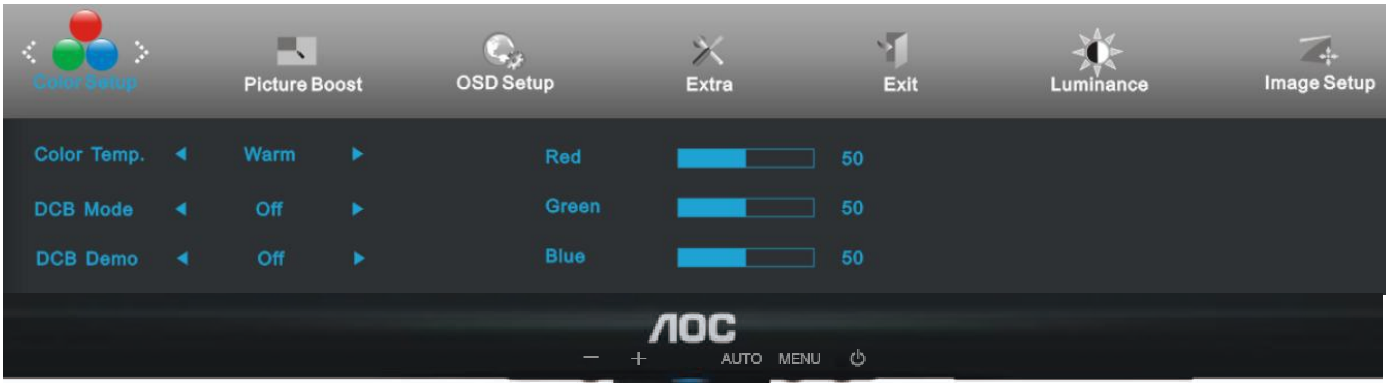
3 Press - or + to select submenu, and press **MENU** to enter.

4 Press - or + to adjust.

5 Press **AUTO** to exit.

	Clock	0-100	Adjust picture Clock to reduce Vertical-Line noise.
	Phase	0-100	Adjust Picture Phase to reduce Horizontal-Line noise
	Sharpness	0-100	Adjust picture sharpness
	H.Position	0-100	Adjust the horizontal position of the picture.
	V.Position	0-100	Adjust the vertical position of the picture.

Color Setup



1 Press **MENU** (Menu) to display menu.

2 Press - or + to select  (Color Setup), and press **MENU** to enter.

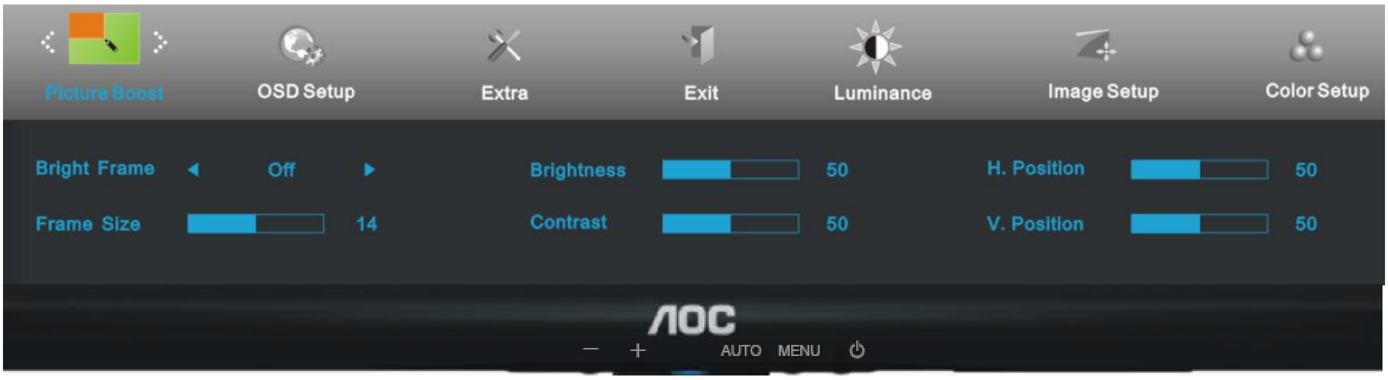
3 Press - or + to select submenu, and press **MENU** to enter.

4 Press - or + to adjust.

5 Press **AUTO** to exit.

	Color setup.	Warm		Recall Warm Color Temperature from EEPROM.
		Normal		Recall Normal Color Temperature from EEPROM.
		Cool		Recall Cool Color Temperature from EEPROM.
		sRGB		Recall SRGB Color Temperature from EEPROM.
		User	Red	Red Gain from Digital-register
			Green	Green Gain Digital-register.
			Blue	Blue Gain from Digital-register
	DCB Mode	Full Enhance	on or off	Disable or Enable Full Enhance Mode
		Nature Skin	on or off	Disable or Enable Nature Skin Mode
		Green Field	on or off	Disable or Enable Green Field Mode
		Sky-blue	on or off	Disable or Enable Sky-blue Mode
		AutoDetect	on or off	Disable or Enable AutoDetect Mode
	DCB Demo		On or off	Disable or Enable Demo

Picture Boost



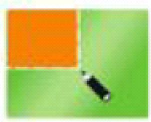
1 Press **MENU** (Menu) to display menu.

2 Press - or + to select  (Picture Boost), and press **MENU** to enter.

3 Press - or + to select submenu, and press **MENU** to enter.

4 Press - or + to adjust.

5 Press **AUTO** to exit.

	Frame Size	14-100	Adjust Frame Size
	Brightness	0-100	Adjust Frame Brightness
	Contrast	0-100	Adjust Frame Contrast
	H. position	0-100	Adjust Frame horizontal Position
	V.position	0-100	Adjust Frame vertical Position
	Bright Frame	on or off	Disable or Enable Bright Frame

OSD Setup



1 Press **MENU** (Menu) to display menu.

2 Press - or + to select  (OSD Setup), and press **MENU** to enter.

3 Press - or + to select submenu, and press **MENU** to enter.

4 Press - or + to adjust.

5 Press **AUTO** to exit.

	H.Position	0-100	Adjust the horizontal position of OSD
	V.Position	0-100	Adjust the vertical position of OSD
	Timeout	5-120	Adjust the OSD Timeout
	Transparence	0-100	Adjust the transparence of OSD
	Language		Select the OSD language

Extra



1 Press **MENU** (Menu) to display menu.

2 Press - or + to select  (Extra), and press **MENU** to enter.

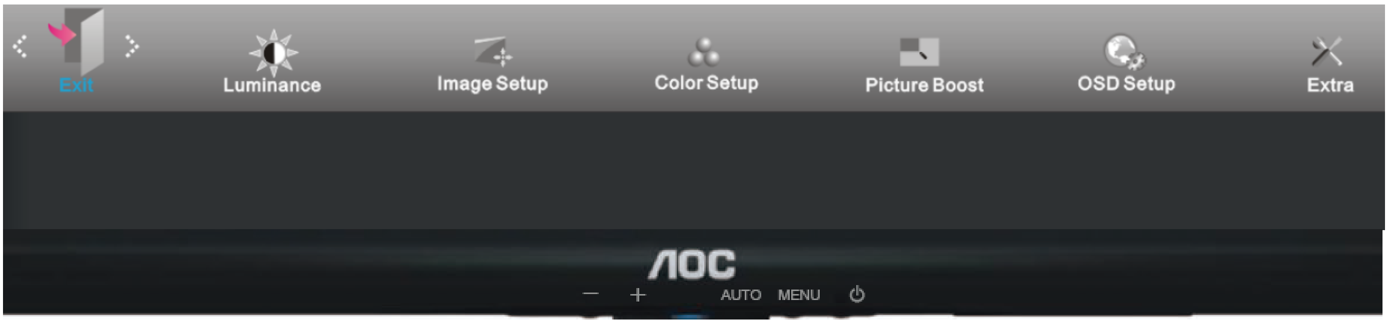
3 Press - or + to select submenu, and press **MENU** to enter.

4 Press - or + to adjust.

5 Press **AUTO** to exit.

	Input Select	Auto (For the models with dual or more inputs)	Select to Auto Detect input signal
		D-SUB	Select Analog Signal Source as Input
		DVI (available for selected models)	Select DVI Sinal Source as Input
		HDMI(available for selected models)	Select HDMI Sinal Source as Input
	Auto Config	yes or no	Auto adjust the picture to default.
	Off timer	0-24hrs	Select DC off time.
	Image Ratio	wide or 4:3	Select wide or 4:3 format for display.
	DDC-CI	yes or no	Turn ON/OFF DDC-CI Support.
	Reset	yes or no	Reset the menu to default.
	Information		Show the information of the main image and sub-image source.

Exit



1 Press **MENU** (Menu) to display menu.

2 Press - or + to select  (Exit), and press **MENU** to enter.

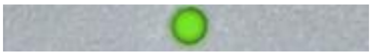
3 Press - or + to select submenu, and press **MENU** to enter.

4 Press - or + to adjust.

5 Press **AUTO** to exit.

	Exit		Exit the main OSD

LED Indicators

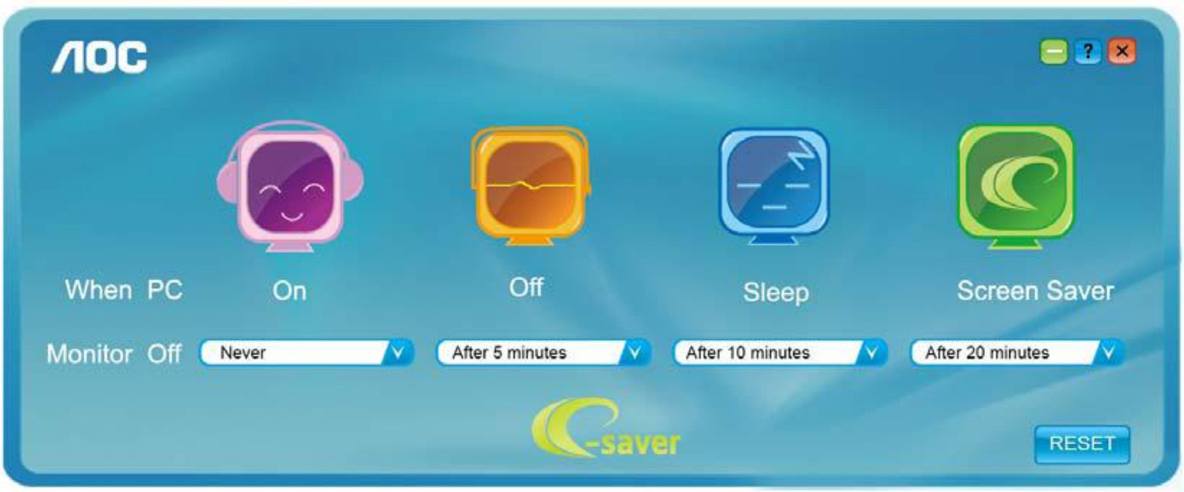
Status	LED Color	
Full Power Mode	Green or Blue	
Active-off Mode	Orange or red	

e-Saver

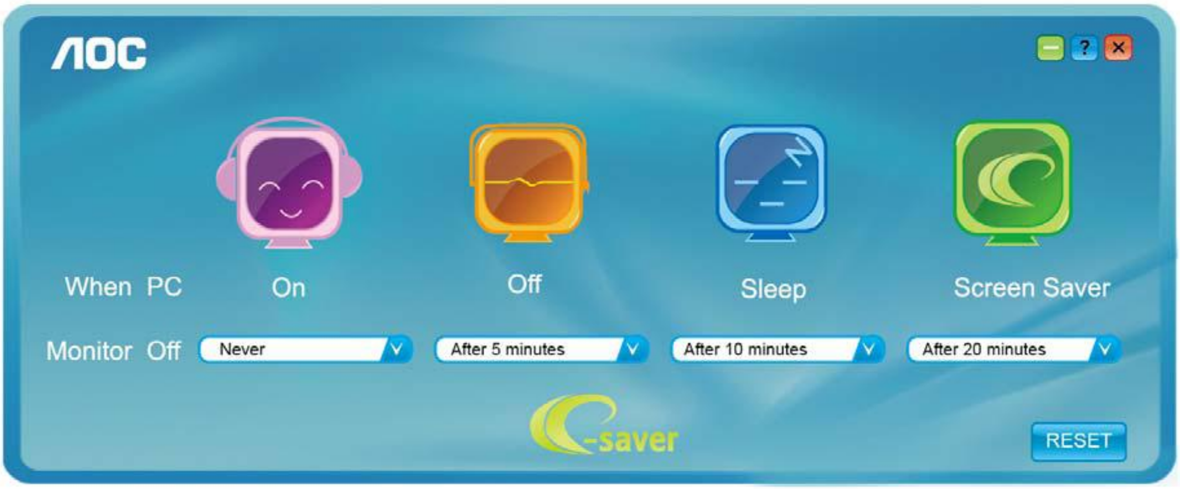
Welcome to use AOC e-Saver monitor power management software! The AOC e-Saver features Smart Shutdown functions for your monitors, allows your monitor to timely shutdown when PC unit is at any status (On, Off, Sleep or Screen Saver); the actual shutdown time depends on your preferences (see example below).
Please click on "driver/e-Saver/setup.exe" to start installing the e-Saver software, follow the install wizard to complete software installation.

Under each of the four PC status, you may choose from the pull-down menu the desired time (in minutes) for your monitor to automatically shutdown. The example above illustrated:

1) The monitor will never shutdown when the PC is powered on.
2) The monitor will automatically shutdown 5 minutes after the PC is powered off.
3) The monitor will automatically shutdown 10 minutes after the PC is in sleep/stand-by mode.
4) The monitor will automatically shutdown 20 minutes after the screen saver appears.



You can click “RESET” to set the e-Saver to its default settings like below.



Screen+

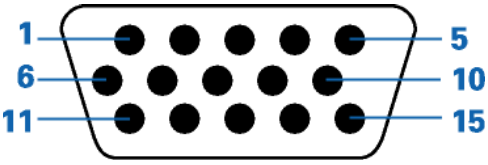


Welcome to "Screen+" software by AOC, Screen+ software is a desktop screen splitting tool, it splits the desktop into different panes, each pane displays a different window. You only need to drag the window to a corresponding pane, when you want to access it. It supports multiple monitor display to make your task easier. Please follow the installation software to install it.

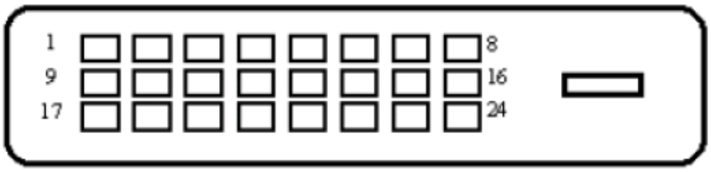


4. Input/Output Specification

4.1 Input Signal Connector



Pin Number	15-Pin Side of the Signal Cable
1	Video-Red
2	Video-Green
3	Video-Blue
4	N.C.
5	Detect Cable
6	GND-R
7	GND-G
8	GND-B
9	+5V
10	Ground
11	N.C.
12	DDC-Serial data
13	H-sync
14	V-sync
15	DDC-Serial clock



Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
1	TMDS Data 2-	9	TMDS Data 1-	17	TMDS Data 0-
2	TMDS Data 2+	10	TMDS Data 1+	18	TMDS Data 0+
3	TMDS Data 2/4 Shield	11	TMDS Data 1/3 Shield	19	TMDS Data 0/5 Shield
4	TMDS Data 4-	12	TMDS Data 3-	20	TMDS Data 5-
5	TMDS Data 4+	13	TMDS Data 3+	21	TMDS Data 5+
6	DDC Clock	14	+5V Power	22	TMDS Clock Shield
7	DDC Data	15	Ground(for+5V)	23	TMDS Clock +
8	N.C.	16	Hot Plug Detect	24	TMDS Clock -

4.2 Preset Display Modes

STAND	RESOLUTION	HORIZONTAL FREQUENCY (KHz)	VERTICAL FREQUENCY (Hz)	Panel Size							
				18.5"	19"	19.5"	20"	21.5"	22"	23"	23.6"
VGA	640 X 480@60Hz	31.469	59.940	√	√	√	√	√	√	√	√
	640 X 480@67Hz	35.000	66.667	√	√	√	√	√	√	√	√
	640 X 480@72Hz	37.861	72.809	√	√	√	√	√	√	√	√
	640 X 480@75Hz	37.500	75.000	√	√	√	√	√	√	√	√
DOS MODE	720 X 400@70Hz	31.469	70.087	√	√	√	√	√	√	√	√
SVGA	800 X 600@56Hz	35.156	56.250	√	√	√	√	√	√	√	√
	800 X 600@60Hz	37.879	60.317	√	√	√	√	√	√	√	√
	800 X 600@72Hz	48.077	72.188	√	√	√	√	√	√	√	√
	800 X 600@75Hz	46.875	75.000	√	√	√	√	√	√	√	√
MAC MODE	832 X 624@75Hz	49.725	74.551	√	√	√	√	√	√	√	√
XGA	1024 X 768@60Hz	48.363	60.004	√	√	√	√	√	√	√	√
	1024 X 768@70Hz	56.476	70.069	√	√	√	√	√	√	√	√
	1024 X 768@75Hz	60.023	75.029	√	√	√	√	√	√	√	√
WXGA	1280 X 720@60Hz	45.000	60.000				√				
VESA-MODE	1280 X 960@60Hz	60.000	60.000						√	√	
SXGA	1280 X 1024@60Hz	63.981	60.020		√	√		√	√	√	√
	1280 X 1024@75Hz	79.976	75.025		√	√		√	√	√	√
WXGA	1360 X 768@60Hz	47.712	60.015	√							
	1366 X 768@60Hz	47.712	59.790	√							
WXGA+	1440 X 900@60Hz	55.935	59.876		√			√	√	√	√
WSXGA	1600 X 900@60Hz	60.000	59.950			√	√				
WSXGA+	1680 X 1050@60Hz	65.290	59.950					√	√	√	√
FHD	1920 X 1080@60Hz	67.500	60.000					√		√	√

4.3 Panel Specification

4.3.1 General Features

M195FGE-L20 is a 19.5" TFT Liquid Crystal Display module with WLED Backlight unit and 30 pins 2ch-LVDS interface. This module supports 1600 x 900 HD+ mode and can display up to 16.7M colors. The converter module for Backlight is not built in.

4.3.2 Display Characteristics

Item	Specification	Unit
Screen Size	19.5" real diagonal	
Driver Element	a-si TFT active matrix	-
Pixel Number	1600 x R.G.B. x 900	pixel
Pixel Pitch	0.27 (H) x 0.27 (V)	mm
Pixel Arrangement	RGB vertical stripe	-
Display Colors	16.7M	color
Transmissive Mode	Normally white	-
Surface Treatment	AG type, 3H hard coating, Haze 25	-
Luminance, White	250	Cd/m2
Color Gamut	72% of NTSC(Typ.)	-
RoHS,Halogen Free &TCO 5.2	RoHS, Halogen Free TCO 5.2 compliance	
Power Consumption	Total13.83 W (Max.) @ cell 3.75 W (Max.), BL 10.08W(Max.)	

Item		Min.	Typ.	Max.	Unit
Module Size	Horizontal (H)	451.5	452.0	452.5	mm
	Vertical (V)	262.5	263.0	263.5	mm
	Thickness (T)	-	10.5	11	mm
Bezel Area	Horizontal	434.8	435.3	435.8	mm
	Vertical	242.56	243.06	243.56	mm
Active Area	Horizontal	-	432.0	-	mm
	Vertical	-	239.76	-	mm
Weight		-	(1430)	(1500)	g

4.3.3 Electrical Characteristics

TFT LCD MODULE

Vcc = 5.0 V, Ta = 25 ± 2 ºC, Fr = 75Hz

Parameter		Symbol	Value			Unit
			Min.	Typ.	Max.	
Power Supply Voltage		Vcc	4.5	5	5.5	V
Ripple Voltage		V_{RP}	-	-	300	mV
Rush Current		I_{RUSH}	-	-	3	A
Power Supply Current	White			0.5	0.6	A
	Black			0.65	0.75	A
	Vertical Stripe			0.65	0.75	A
Power Consumption		PLCD		3.25	3.75	Watt
LVDS differential input voltage		Vid	100	-	600	mV
LVDS common input voltage		Vic	1.0	1.2	1.4	V
Logic High Input Voltage		VIH	-	-	0.1	V
Logic Low Input Voltage		VIL	-0.1	-		V

Back Light Unit

Ta = 25 ± 2.ºC

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
LED Light Bar Input Voltage Per Input Pin	VPIN	---	28.8	31.5	V	Duty=100%, IPIN=80mA
LED Light Bar Current Per Input Pin	IPIN		80	85	mA	Duty=100%
LED Life Time	LLED	40000			Hrs	
Power Consumption	PBL	---	9.216	10.08	W	Duty=100%, IPIN=80mA

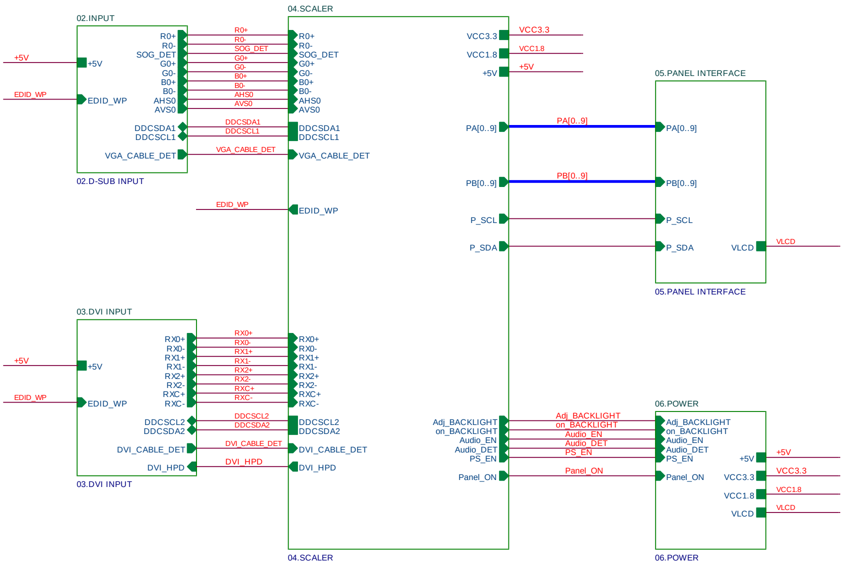
4.3.4 Optical Characteristics

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Color Chromaticity (CIE 1931)	Red	Rx	θ_x=0°, θ_Y =0° CS-2000 R=G=B=255 Gray scale	Typ – 0.03	(0.641)	Typ + 0.03	-
		Ry			(0.338)		
	Green	Gx			(0.315)		
		Gy			(0.629)		
	Blue	Bx			(0.159)		
		By			(0.059)		
	White	Wx			0.313		
		Wy			0.329		
Center Luminance of White (Center of Screen)		L_C		200	250	-	cd/m^2
Contrast Ratio		CR		700	1000	-	-
Response Time		T_R	θ_x=0°, θ_Y =0°	-	1.5	2.5	ms
		T_F		-	3.5	5.5	
White Variation		W	θ_x=0°, θ_Y =0°	75	-	-	%
Viewing Angle	Horizontal	θx- + θx+	CR ≧ 10	150	170	-	Deg.
	Vertical	θy- + θy+		140	160	-	
Viewing Angle	Horizontal	θx- + θx+	CR ≧ 5	160	178	---	Deg.
	Vertical	θy- + θy+		150	170	---	

5. Block Diagram

5.1 Main Board

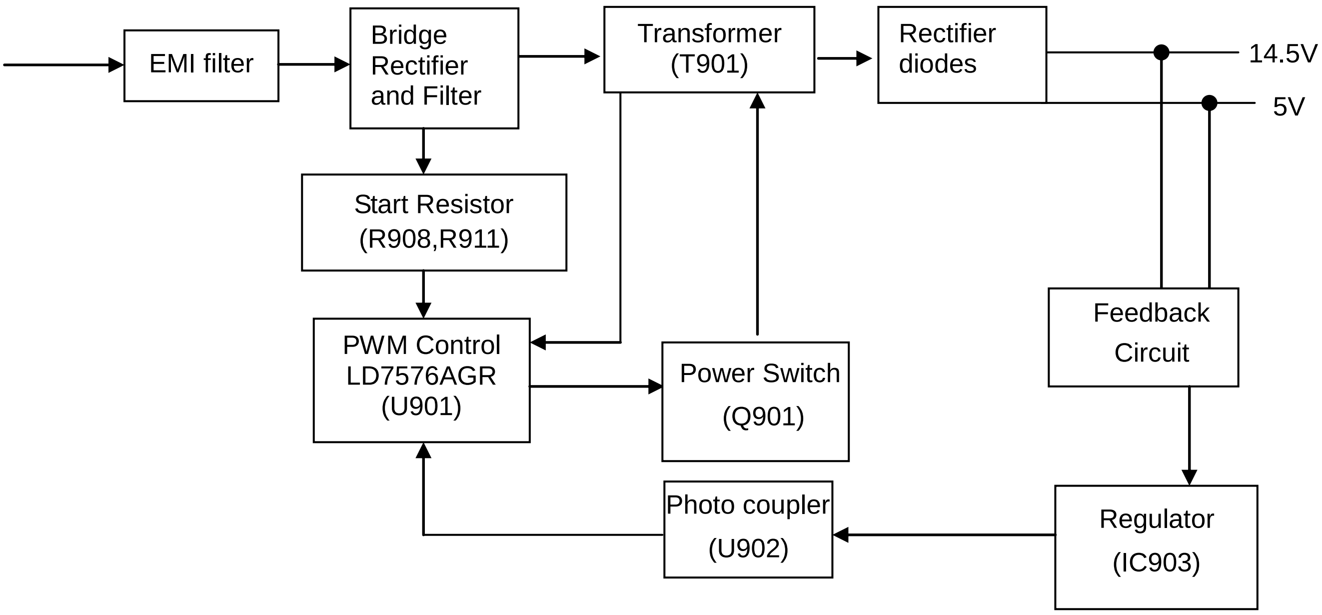
715G4502M01000004I

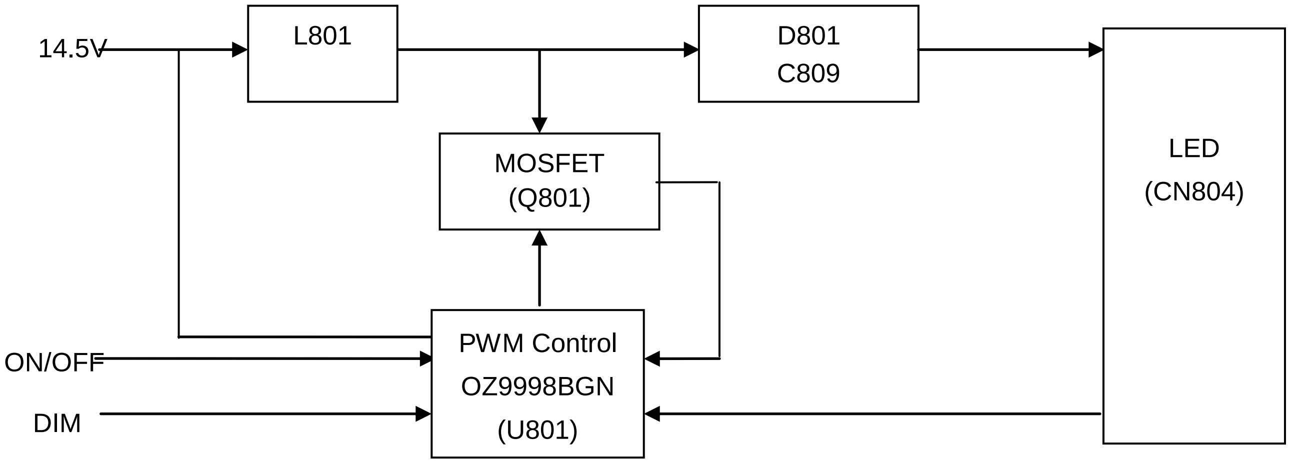


TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	OTS	Size	B
[illegible]	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	B
Key Component	COVER & REVISE HISTORY	PCB NAME	715G4502-M0B-000-0040	[illegible]	[illegible]
Date	Friday, October 29, 2010	Sheet	2 of 7		

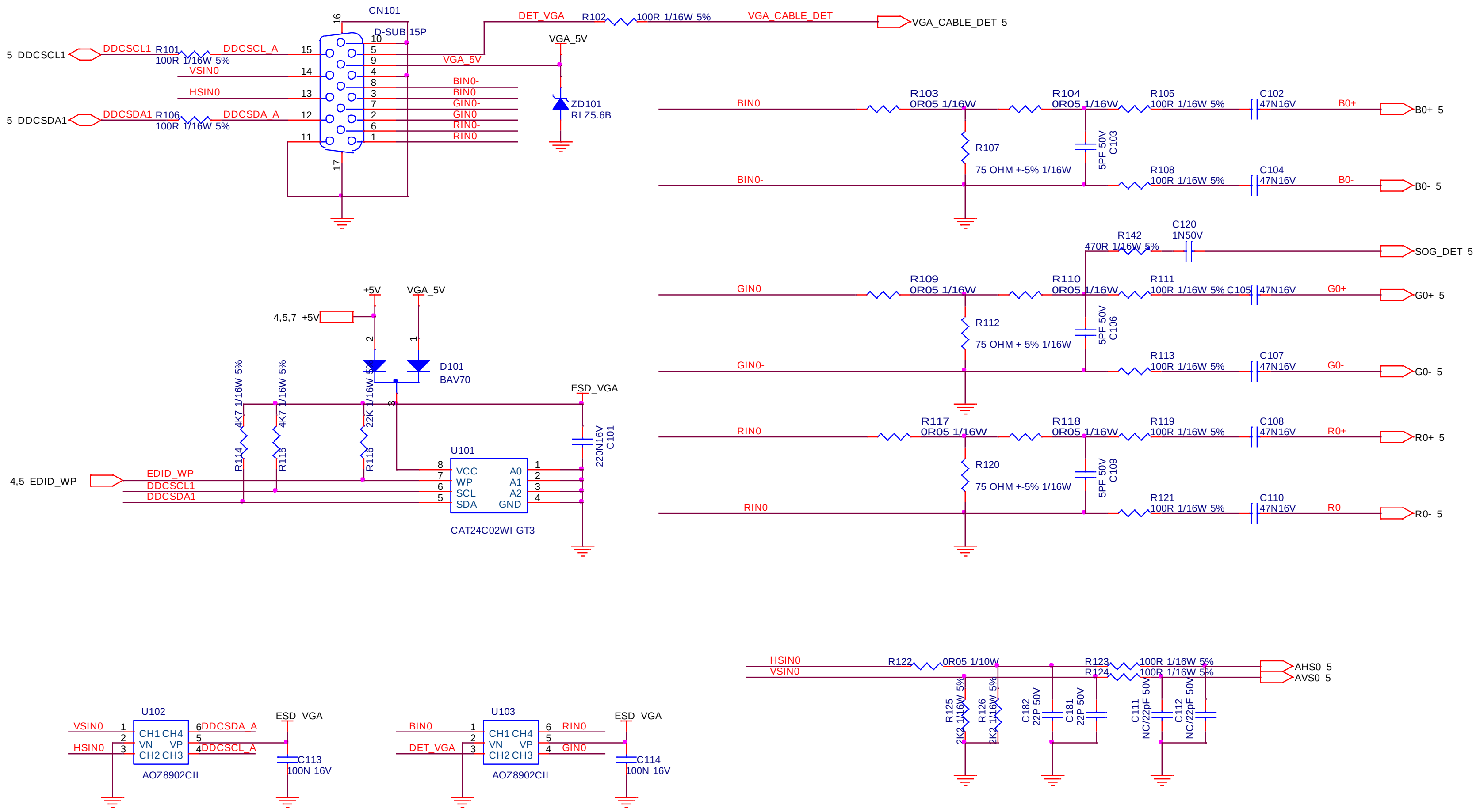
5.2 Power Board

715G4744P01003001M

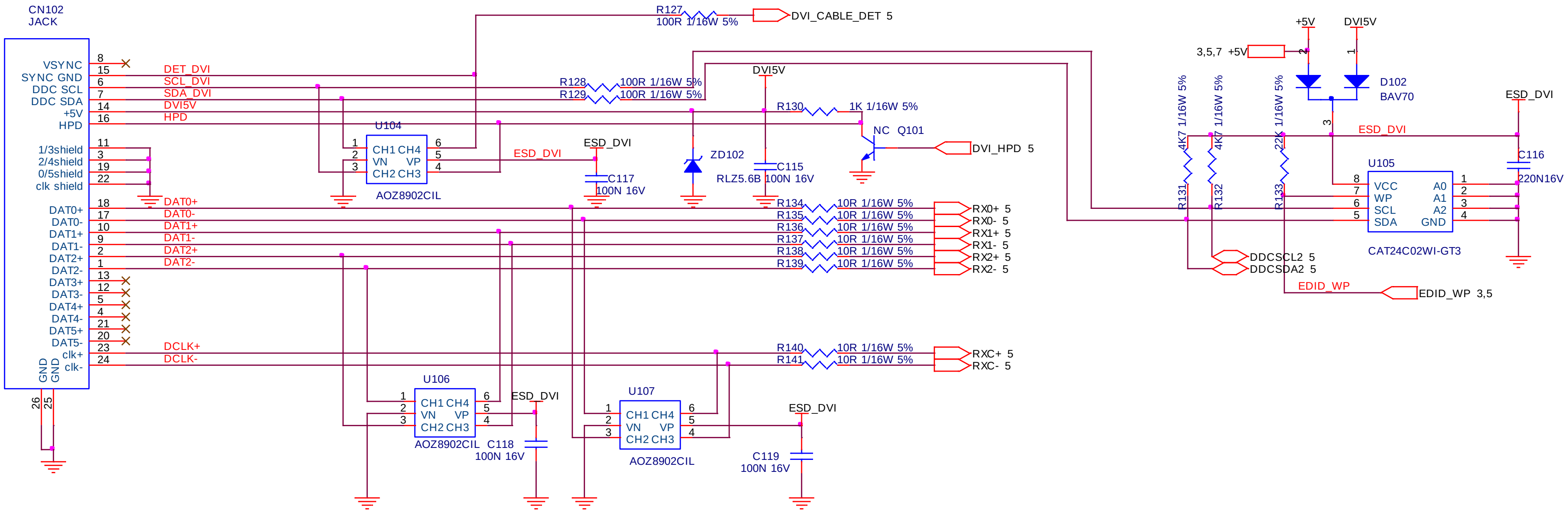




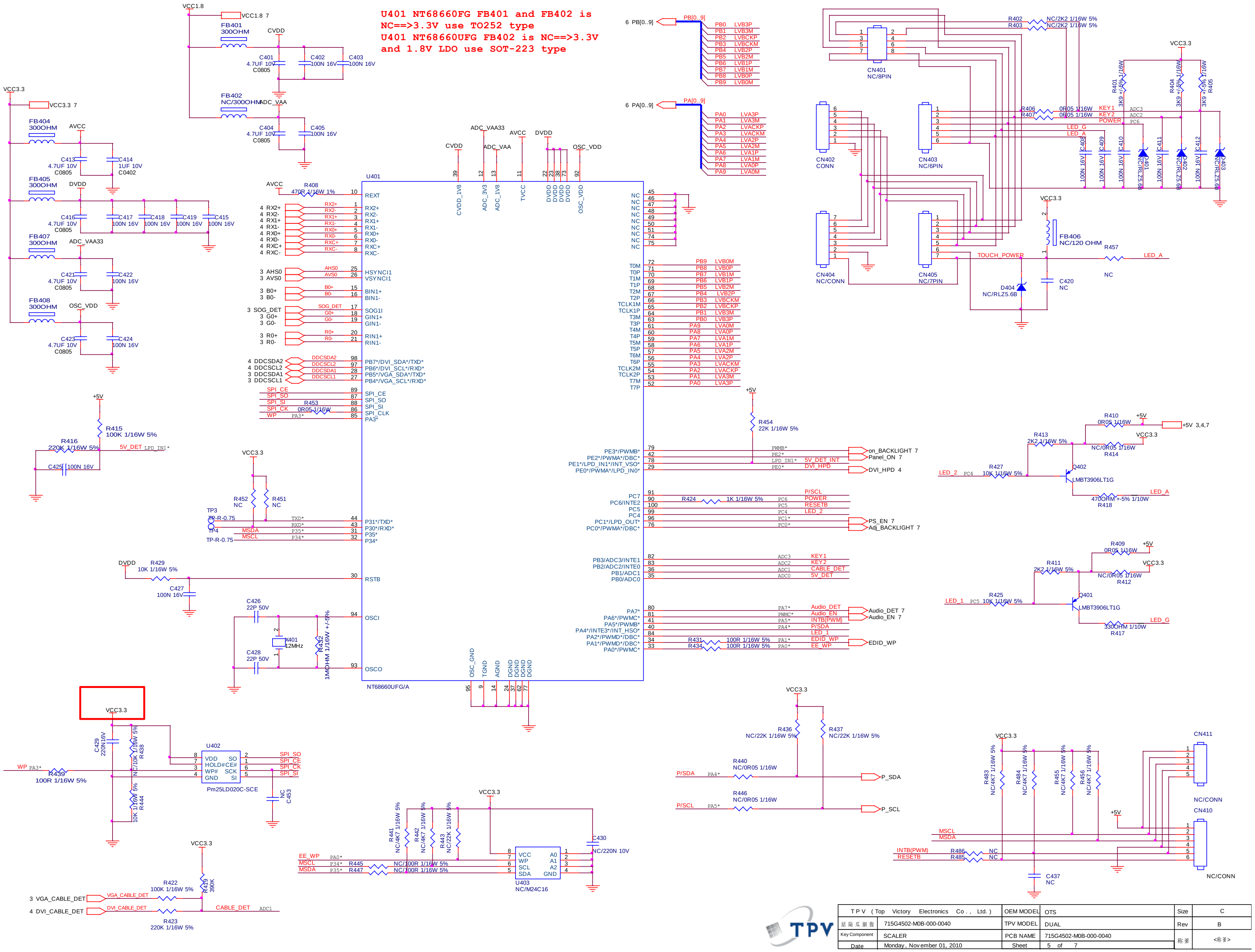
6. Schematic
6.1 Main Board
715G4502M01000004I



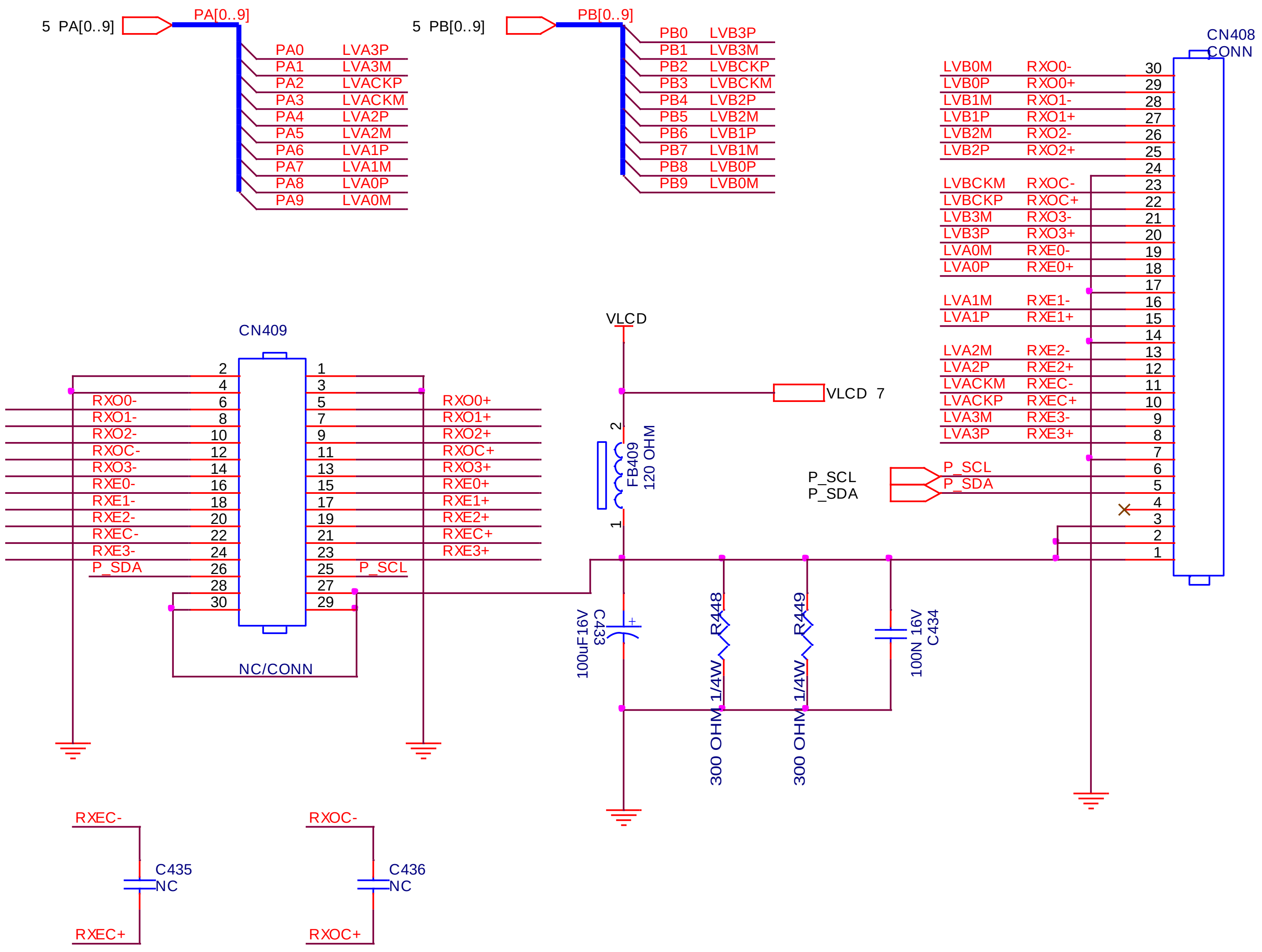
T P V (Top Victory Electronics Co., Ltd.)		OEM MODEL	OTS	Size	B
絧 隔 瓜 綢 腹	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	B
Key Component	D-SUB I/O	PCB NAME	715G4502-M0B-000-0040	称 爹	<称爹>
Date	Friday, October 29, 2010	Sheet	3 of 7		



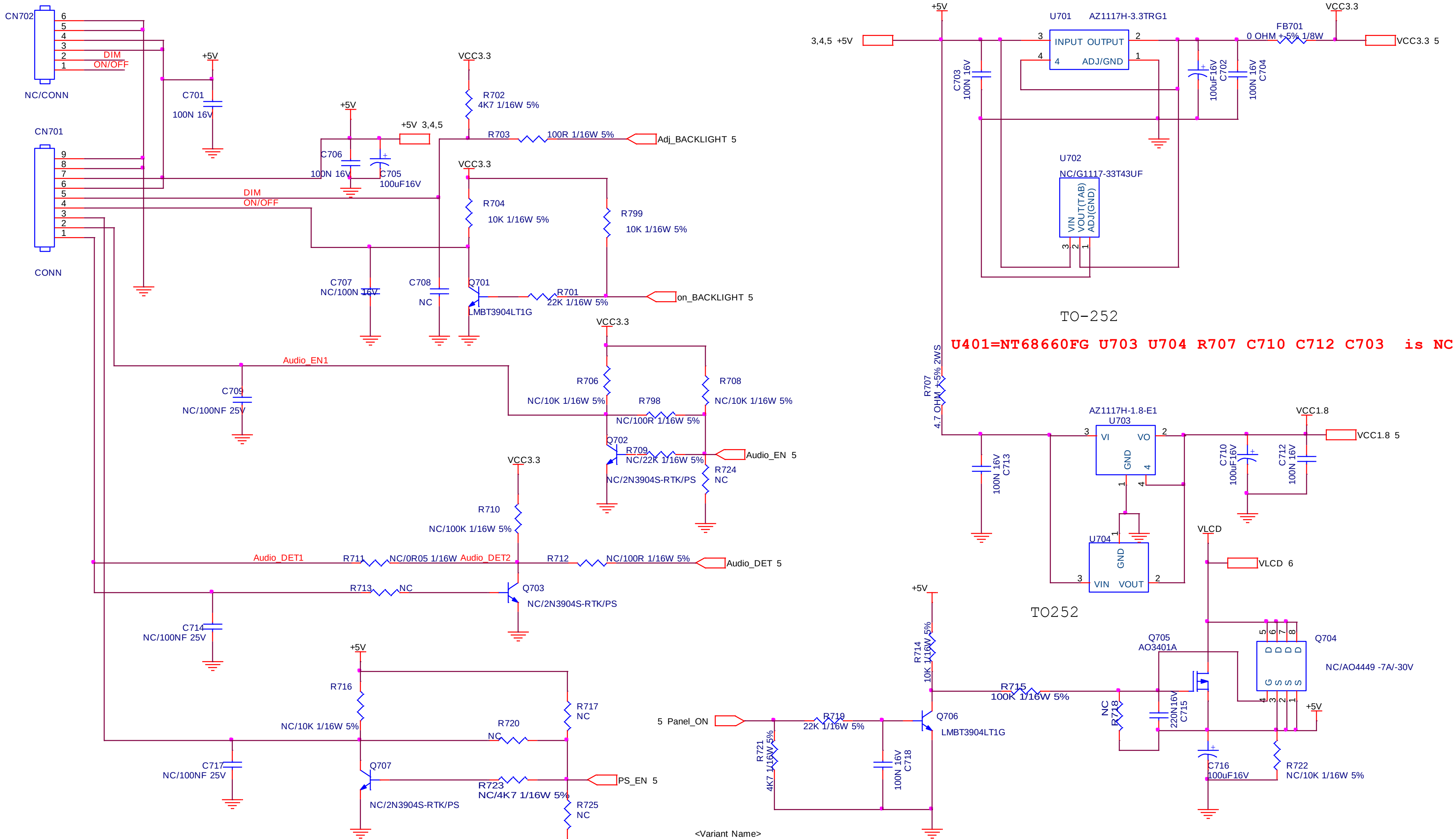
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	OTS	Size	B
紹 隔 瓜 綱 腹	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	B
Key Component	DVI	PCB NAME	715G4502-M0B-000-0040	称 爹	<称爹>
Date	Monday, November 01, 2010	Sheet	4 of 7		



U401 NT68660FG FB401 and FB402 is
NC==>3.3V use TO252 type
U401 NT68660UFG FB402 is NC==>3.3V
and 1.8V LDO use SOT-223 type
U401
NT68660UFG/A
U402
Pm25LD020C-SCE
U403
NC/M24C16
CN401
NC/8PIN
CN402
CONN
CN403
NC/6PIN
CN404
NC/CONN
CN405
NC/7PIN
CN410
CN411
NC/CONN
X401
12MHz
Q401
LMBT3906LT1G
Q402
LMBT3906LT1G
TPV
T P V (Top Victory Electronics Co., Ltd.)
OEM MODEL
OTS
Size
C
715G4502-M0B-000-0040
TPV MODEL
DUAL
Rev
B
Key Component
SCALER
PCB NAME
715G4502-M0B-000-0040
Date
Monday, November 01, 2010
Sheet
5 of 7

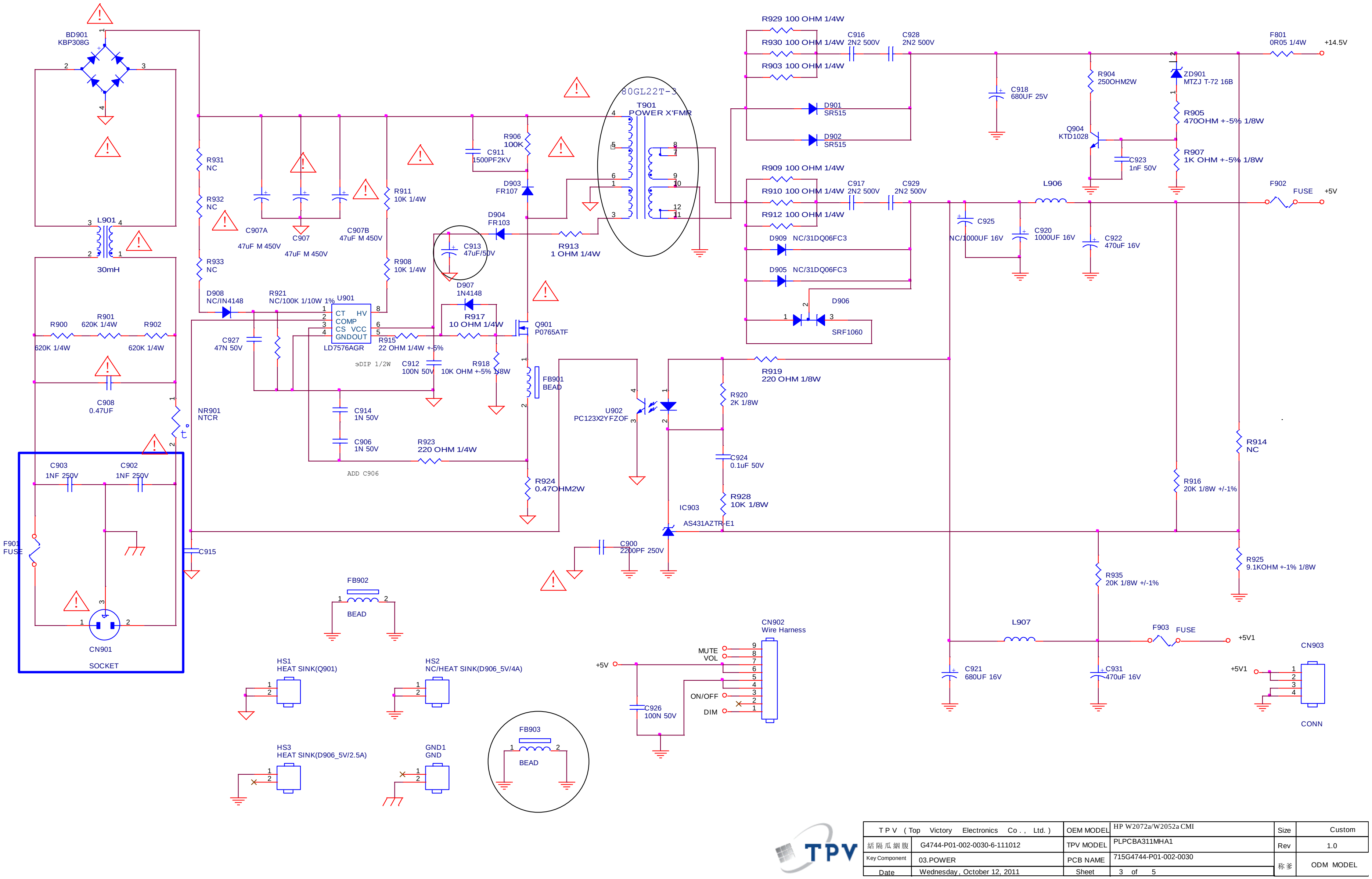


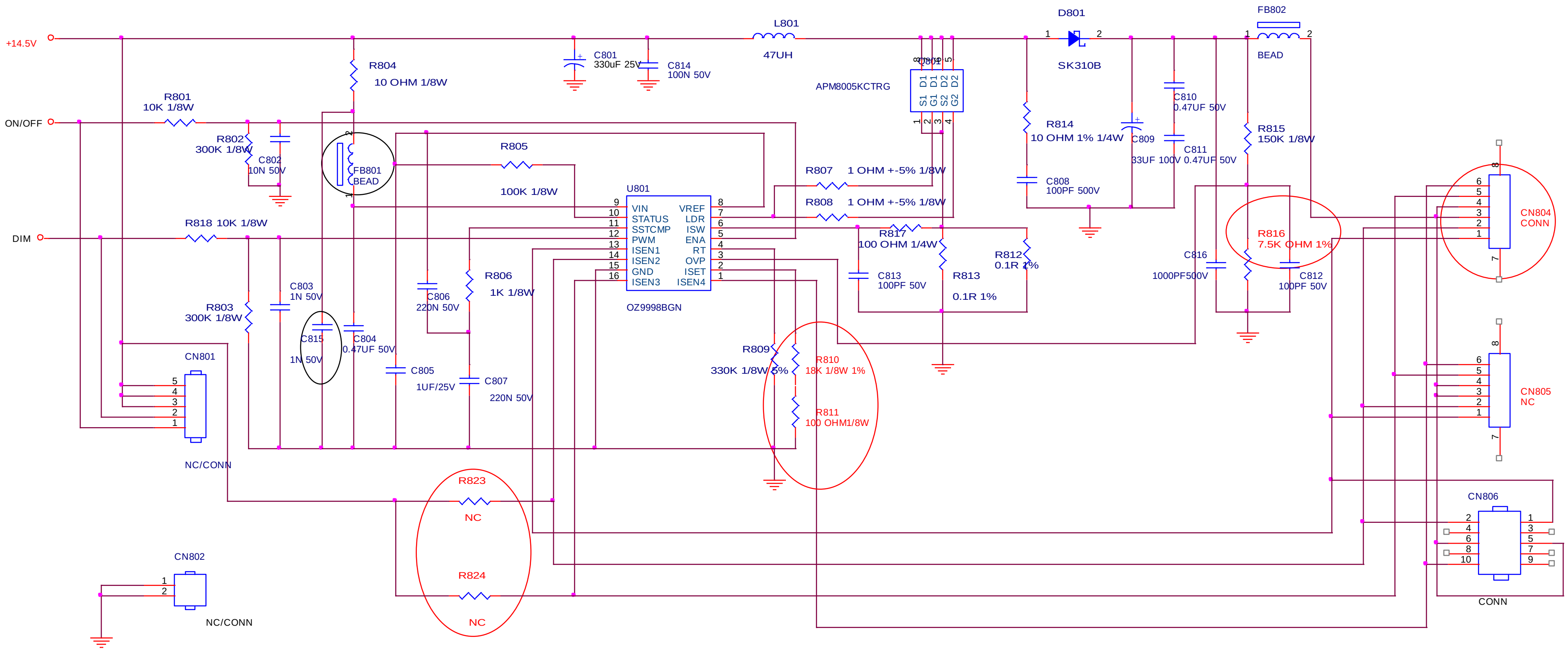
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	OTS	Size	A
紹 隔 瓜 細 腹	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	B
Key Component	LVDS PANEL I/O	PCB NAME	715G4502-M0B-000-0040	称 爹	<称爹>
Date	Friday, October 29, 2010	Sheet	6 of 7		



T P V (Top Victory Electronics Co., Ltd.)		OEM MODEL	OTS	Size	B
紐 顯 瓜 網 股	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	A
Key Component	POWER	PCB NAME	715G4502-M0B-000-0040	称 多	<称多>
Date	Friday, October 29, 2010	Sheet	7 of 7		

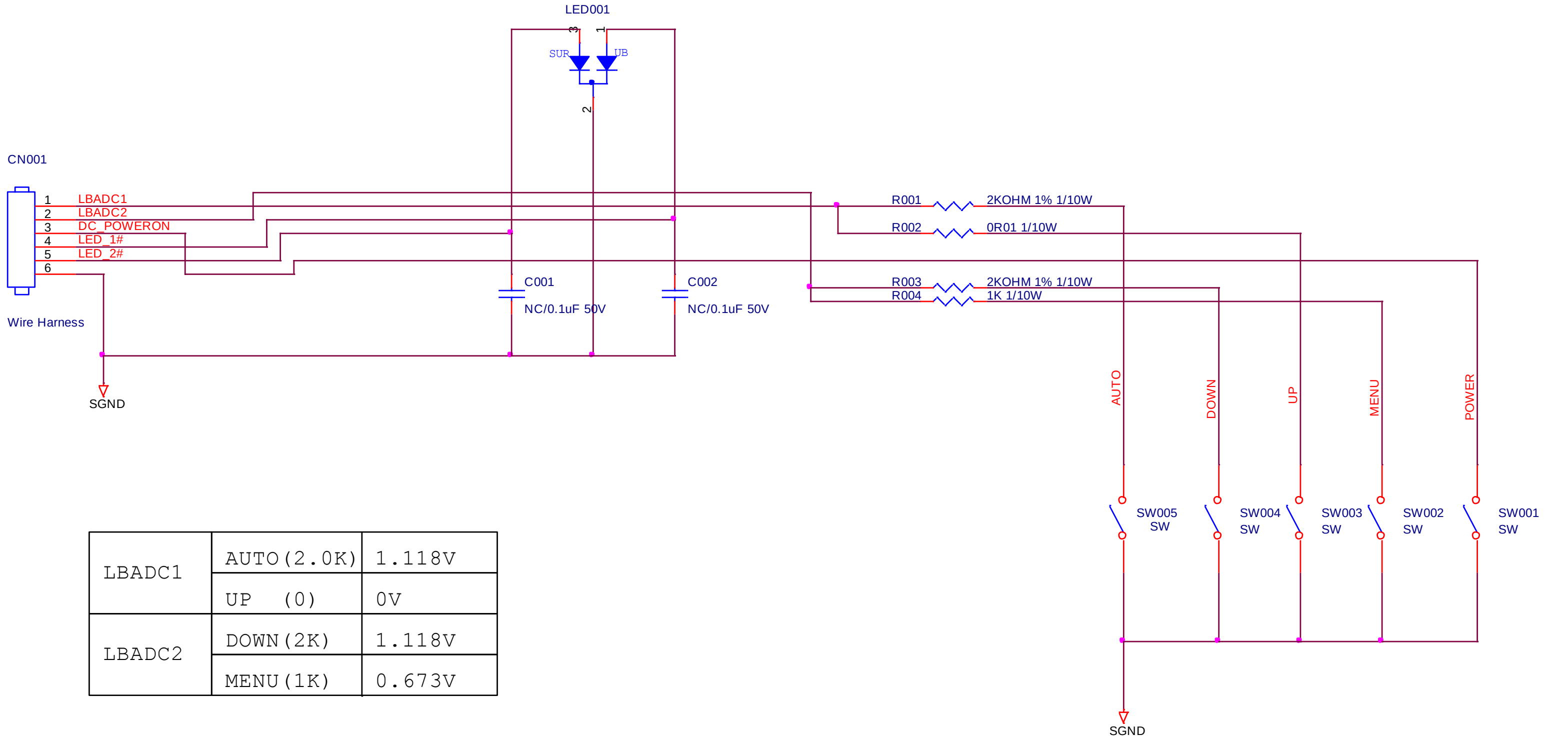
6.2 Power Board
715G4744P01003001M



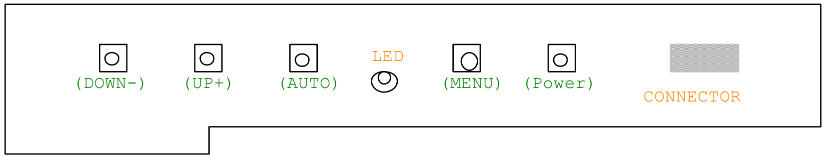


TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	HP W2072a/W2052a	Size	Custom
話 隔 瓜 網 覆	G4744-P01-002-0030-6-111012	TPV MODEL	PLPCBA311MHA1	Rev	1.0
Key Component	04.CONVERTER	PCB NAME	715G4744-P01-002-0030	称 爹	ODM MODEL
Date	Wednesday, October 12, 2011	Sheet	4 of 5		

6.3 Key Board
715G4747K02000001C

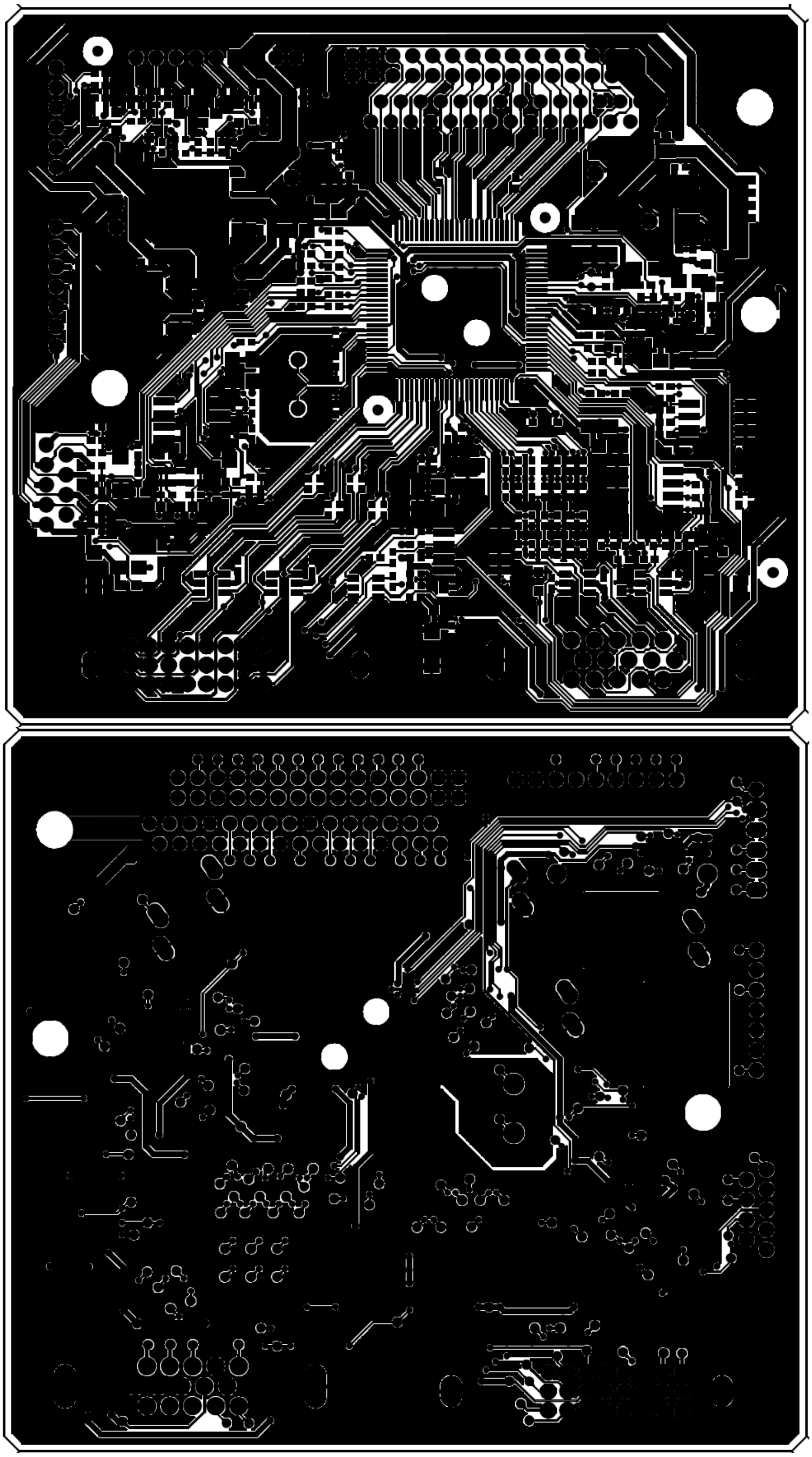


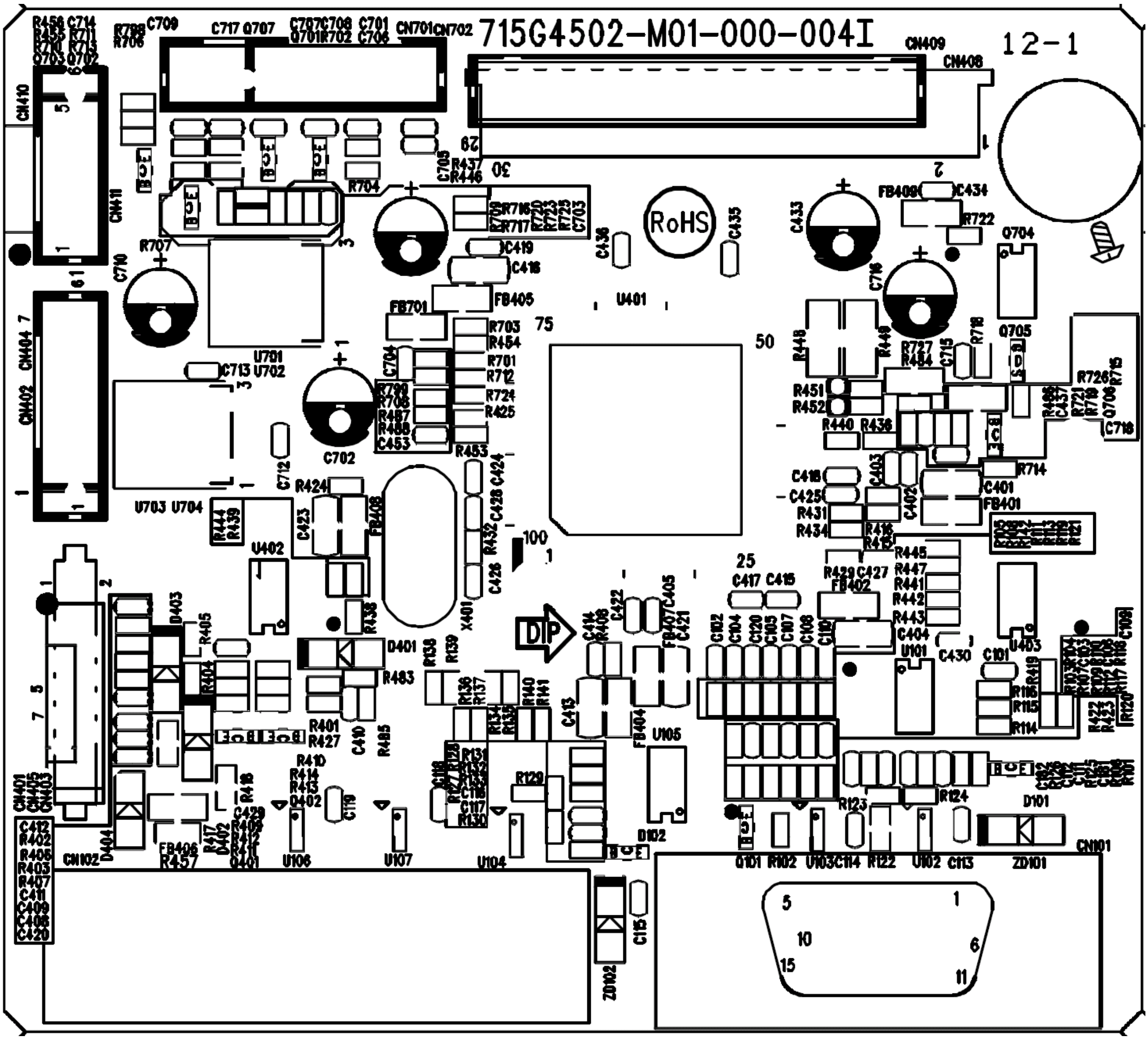
LBADC1	AUTO(2.0K)	1.118V
	UP (0)	0V
LBADC2	DOWN(2K)	1.118V
	MENU(1K)	0.673V



TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	N/A	Size	B
紶隔瓜絪腹	G4747-K0B-000-0040-101026	TPV MODEL	e950Sw	Rev	B
Key Component	2.0.key	PCB NAME	715G4747	称爹	<称爹>
Date	Tuesday, November 02, 2010	Sheet	2 of 2		

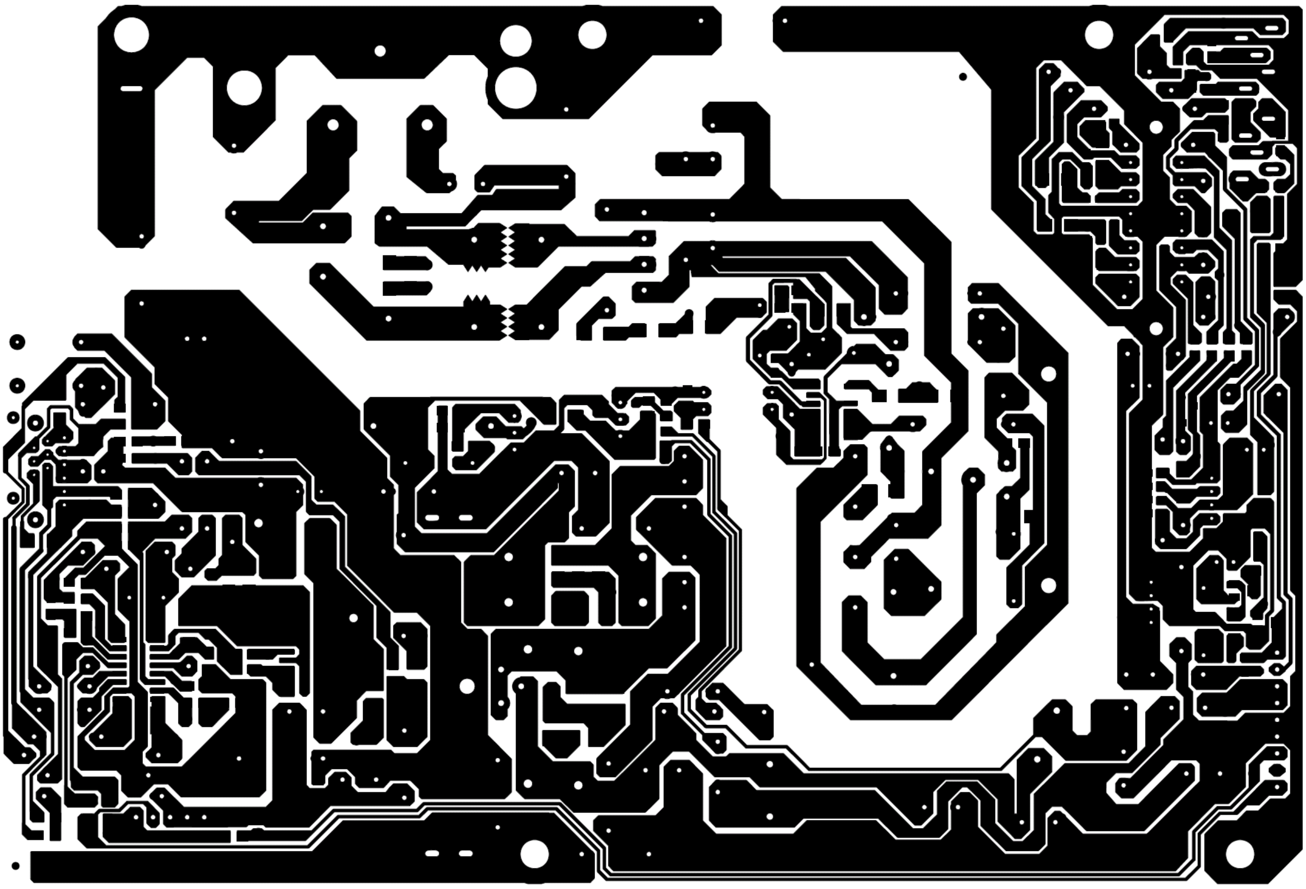
7. PCB Layout
7.1 Main Board
715G4502M01000004I

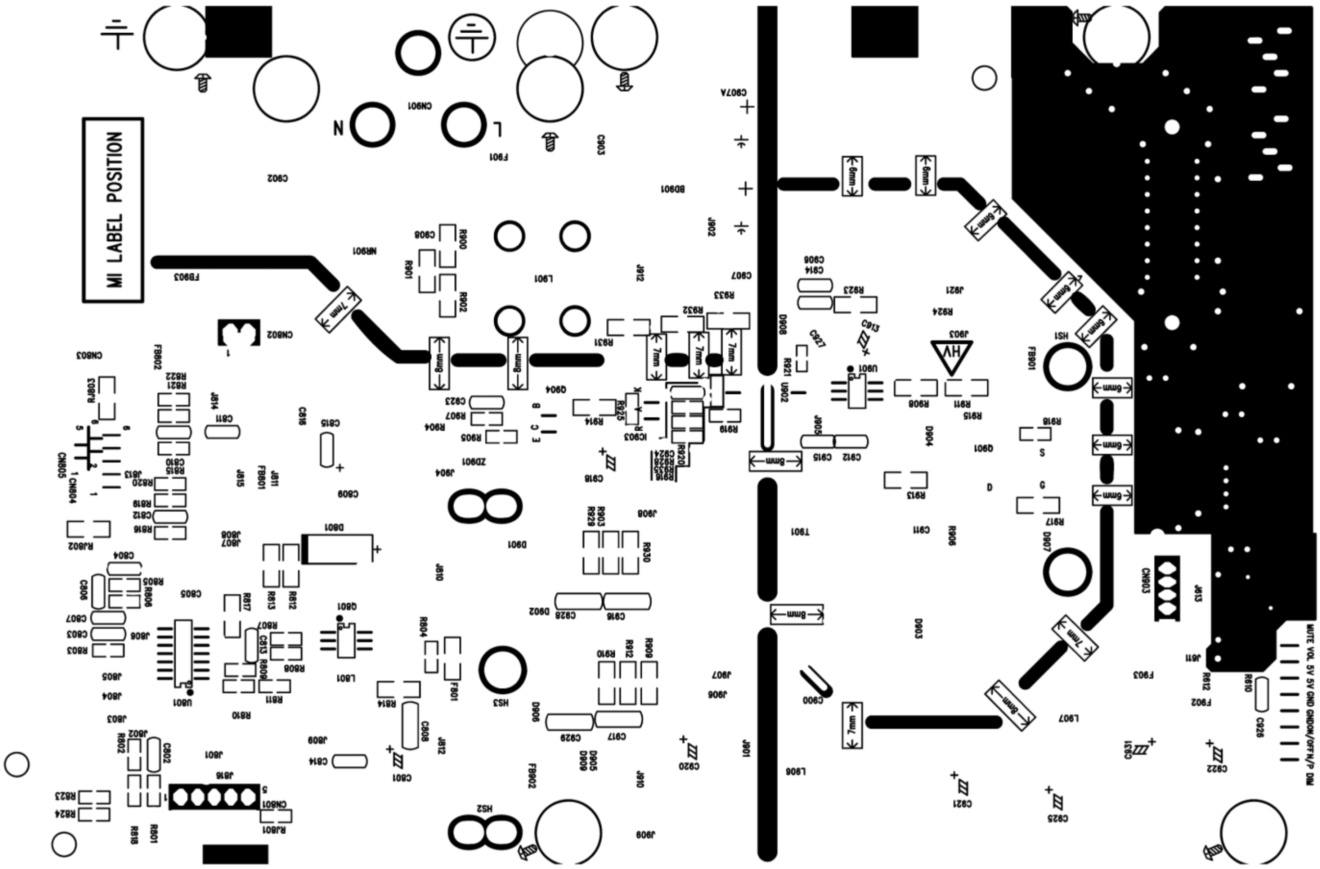


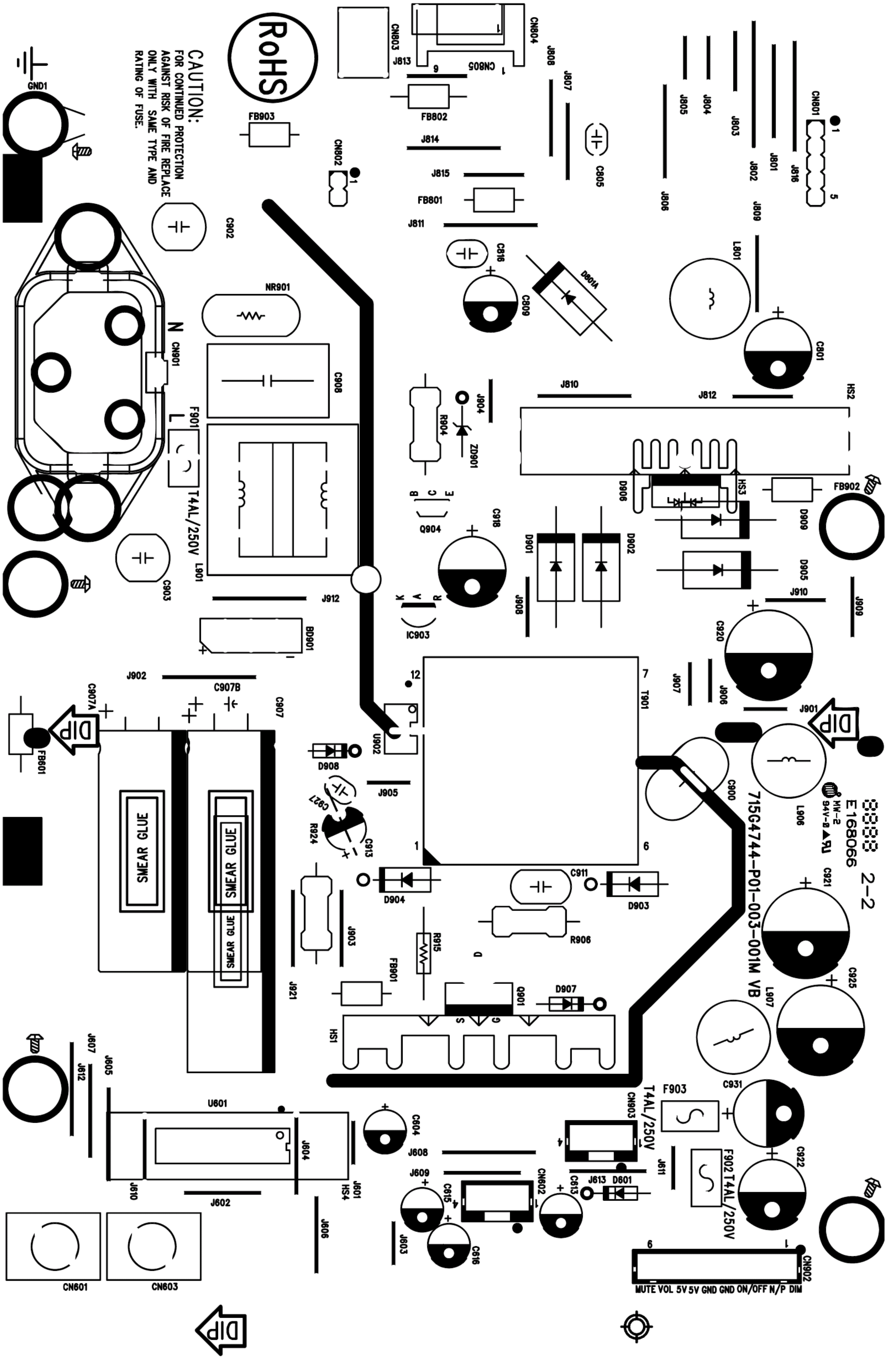

715G4502-M01-000-004I
12-1
RoHS

7.2 Power Board

715G4744P01003001M



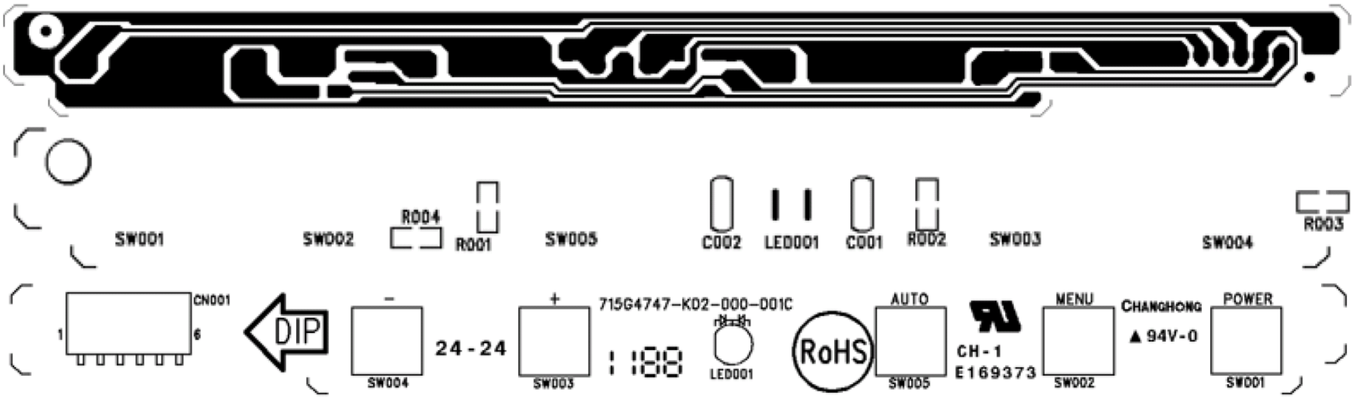



CAUTION:
FOR CONTINUED PROTECTION
AGAINST RISK OF FIRE REPLACE
ONLY WITH SAME TYPE AND
RATING OF FUSE.
RoHS
715G4744-P01-003-001M VB
MUTE VOL 5V 5V GND GND ON/OFF N/P DIM

V

7.3 Key Board

715G4747K02000001C



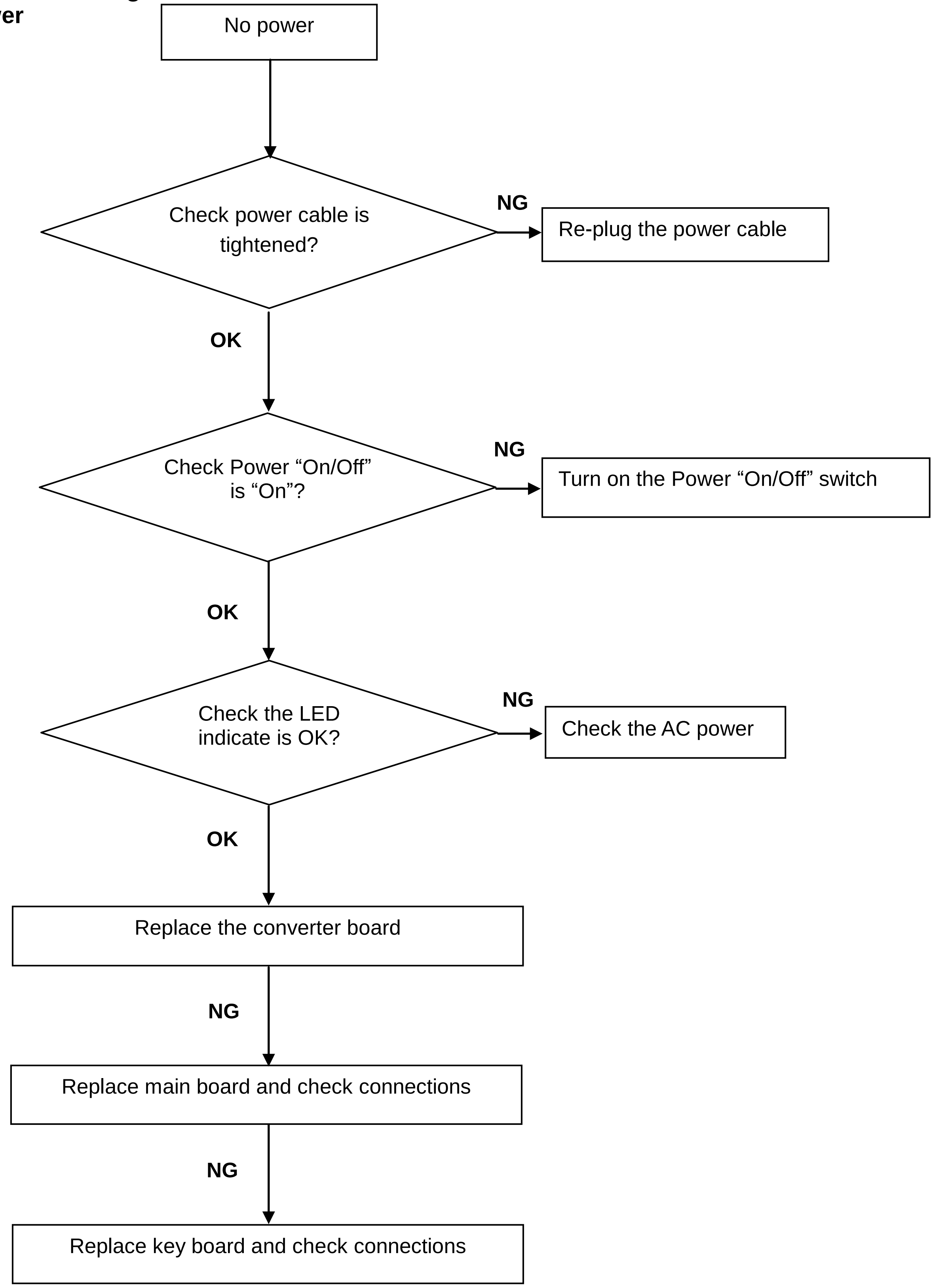
8. Maintainability

8.1 Equipments and Tools Requirement

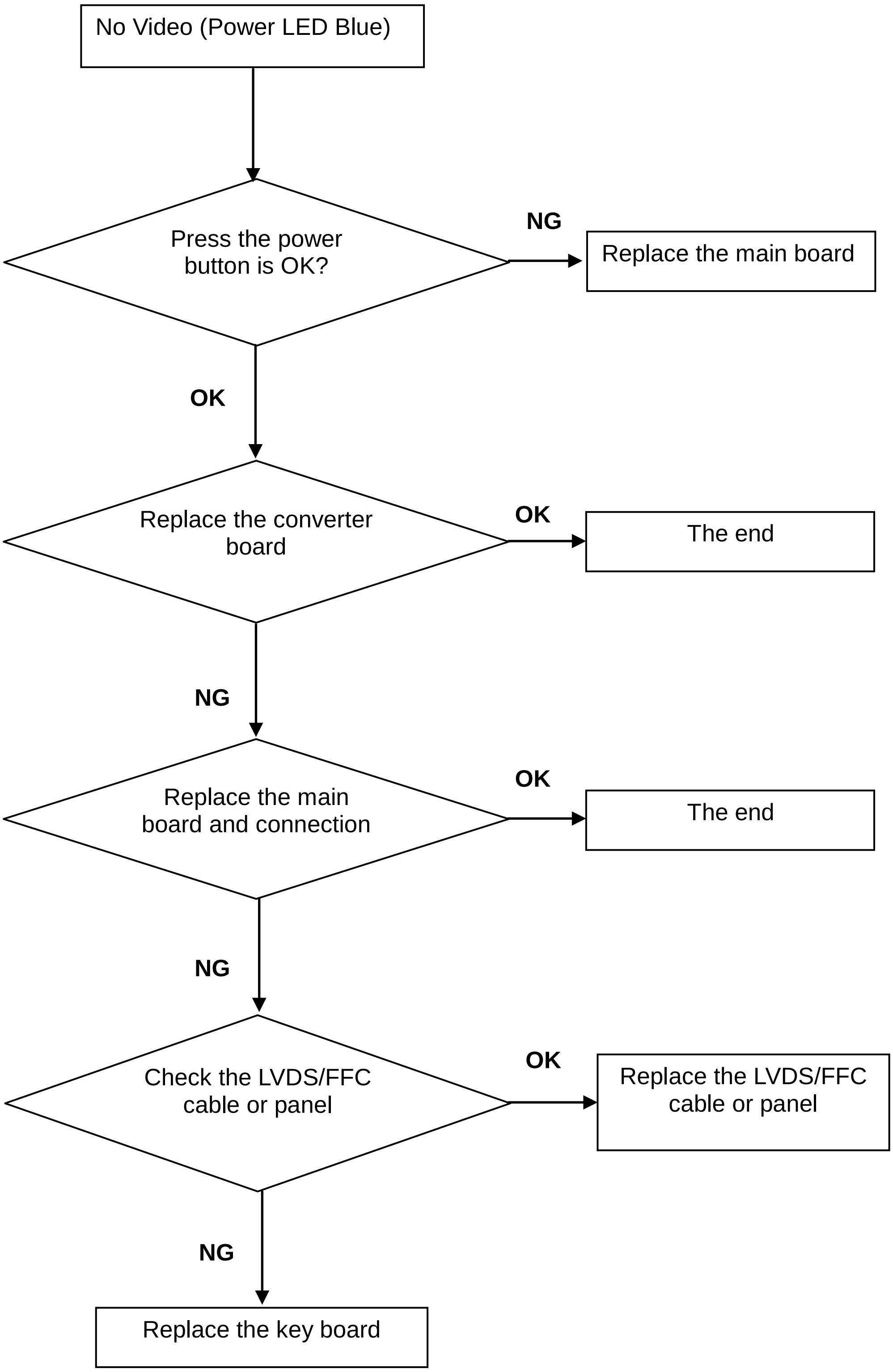
1. Voltmeter.
2. Oscilloscope.
3. Pattern Generator.
4. DDC Tool with an IBM Compatible Computer.
5. Alignment Tool.
6. LCD Color Analyzer.
7. Service Manual.
8. User Manual.

8.2 Trouble Shooting

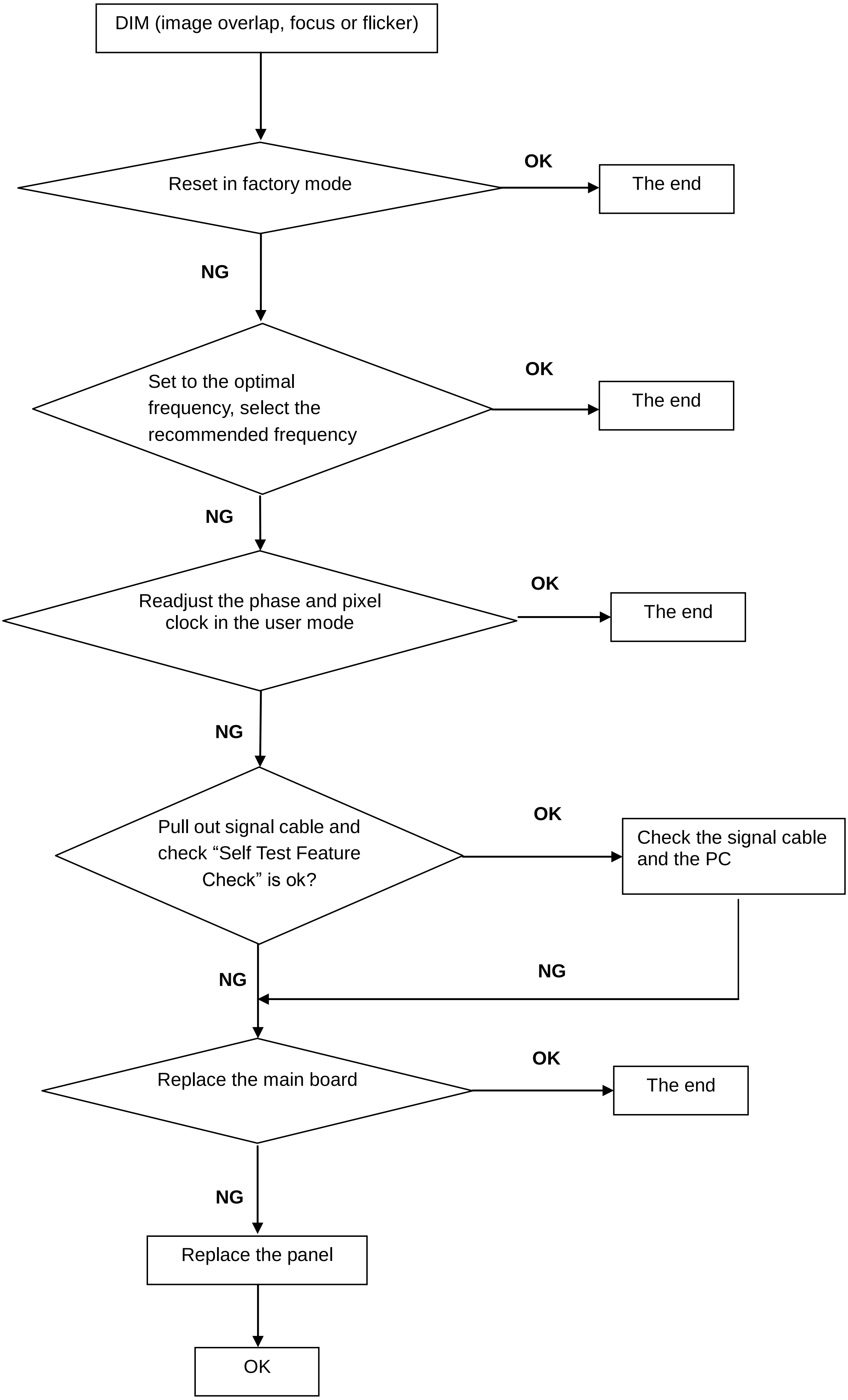
1. No Power



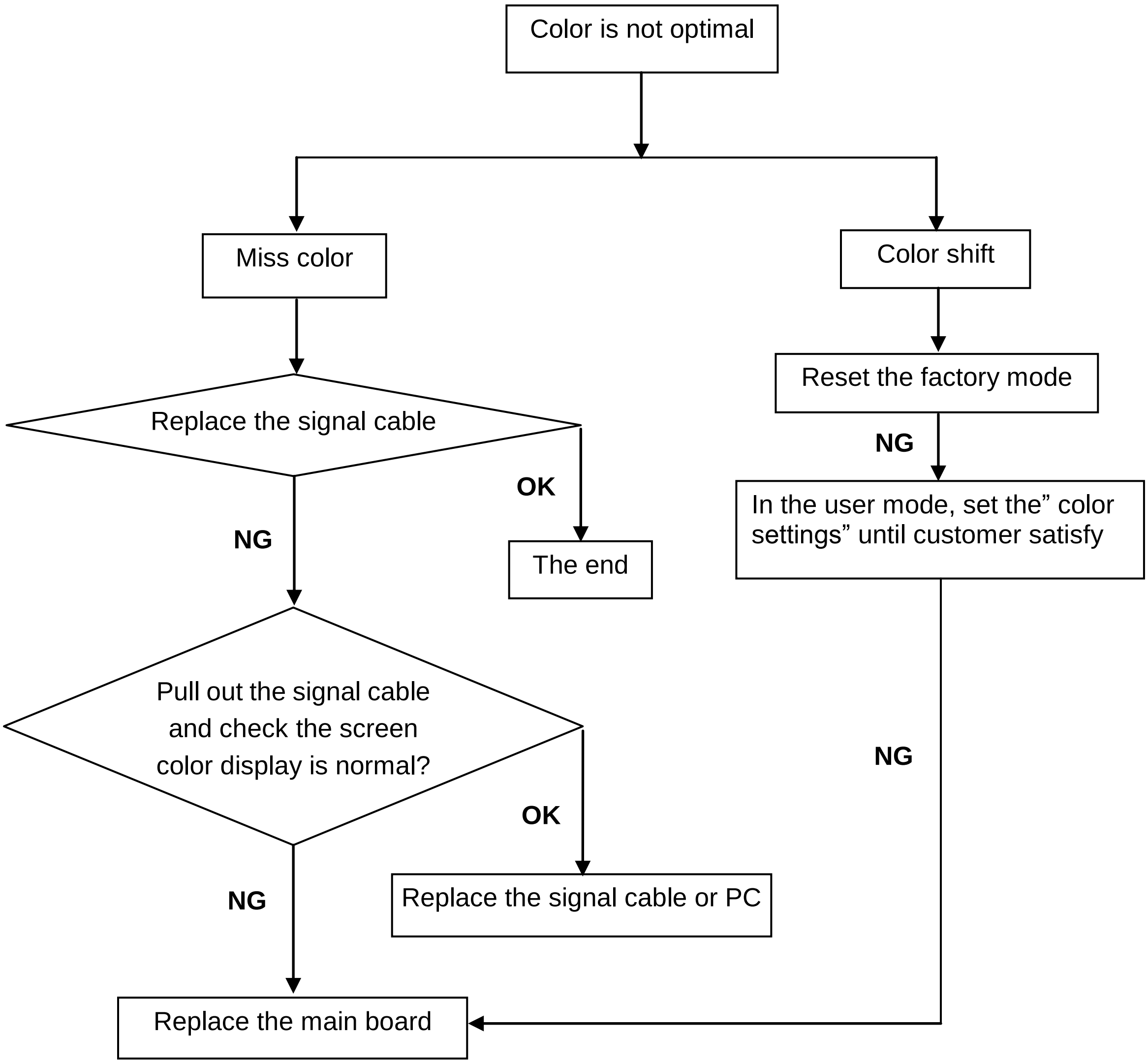
2. No Video (Power LED Blue)



3. DIM


DIM (image overlap, focus or flicker)
Reset in factory mode
OK
The end
NG
Set to the optimal frequency, select the recommended frequency
OK
The end
NG
Readjust the phase and pixel clock in the user mode
OK
The end
NG
Pull out signal cable and check "Self Test Feature Check" is ok?
OK
Check the signal cable and the PC
NG
NG
Replace the main board
OK
The end
NG
Replace the panel
OK

4. Color is not optimal



9.White- Balance, Luminance Adjustment

Approximately 30 minutes should be allowed for warm up before proceeding white balance adjustment.

How to setting MEM channel you can reference to chroma 7120 user guide or simple use “SC” key and “NEXT” Key to modify xyY value and use “ID” key to modify the TEXT description Following is the procedure to do white-balance adjust .

1. Setting the color temp.

A. 6500K:

Warm color temp. parameter is x=313±20， y=329±20

B. 7300K

Normal color temp. parameter is x=301±20， y=317±20

C. 9300K

Cool color temp. parameter is x=283±20，y=297±20

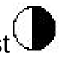
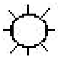
D. sRGB

sRGB color temp. parameter is x=313±20， y=329±20

2. Enter into the factory mode:

Press the MENU button,Pull out the power cord, then plug the power cord. Then the factory OSD will be at the left top of the panel.

3. Biase adjustment:

Set the Contrast  to 50; Adjust the Brightness  to 90.

4. Gain adjustment:

A. Adjust Warm (6500K) color-temperature

1. Switch the chroma-7120 to RGB-Mode (with press “MODE” button)
2. Switch the MEM.channel to Channel 3 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x=313±20， y=329±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

B. Adjust Normal (7300K) color-temperature

1. Switch the chroma-7120 to RGB-Mode (with press “MODE” button)
2. Switch the MEM.channel to Channel 4(with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x=301±20， y=317±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

C. Adjust Cool (9300K) color-temperature

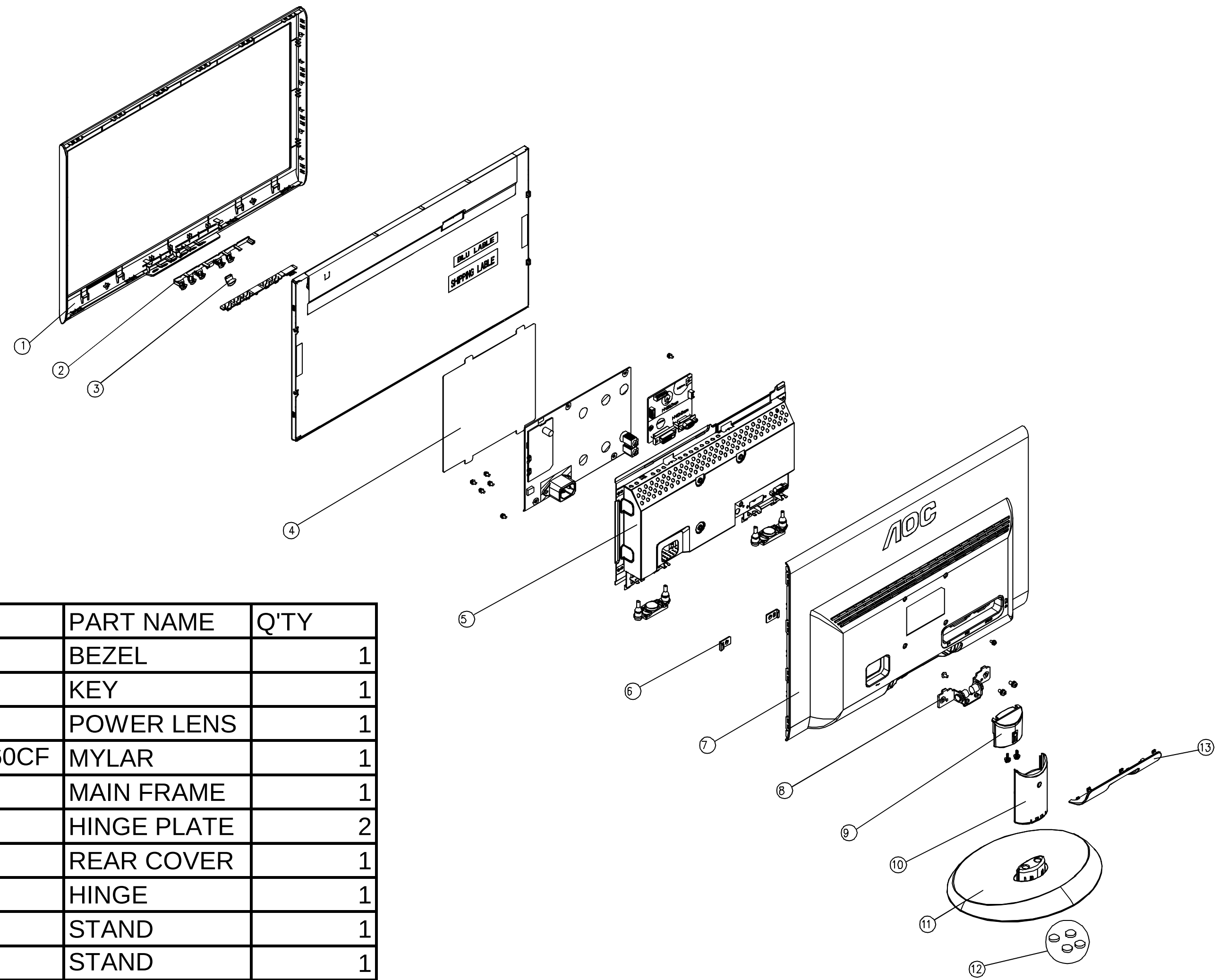
1. Switch the Chroma-7120 to RGB-Mode (with press “MODE” button)
2. Switch the MEM. Channel to Channel 9 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x=283±20，y=297±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

D. Adjust sRGB color-temperature

1. Switch the chroma-7120 to RGB-Mode (with press “MODE” button)
2. Switch the MEM.channel to Channel 10 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x=313±20，y=329±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

E. Turn the Power-button off to quit from factory mode.

10. Monitor Exploded Views



NO	P/N	PART NAME	Q'TY
1	Q34G7636AED*	BEZEL	1
2	A33G1181ABJ*	KEY	1
3	A33G1182 1*	POWER LENS	1
4	Q52G1801MNT160CF	MYLAR	1
5	A15G1586*	MAIN FRAME	1
6	A15G1587101	HINGE PLATE	2
7	Q34G7637ABJ*	REAR COVER	1
8	A37G0241013	HINGE	1
9	A33G1183ABJ*	STAND	1
10	A34G2530ABJ*	STAND	1
11	A34G2531AED*	BASE	1
12	Q12G6600 6	RUBBER	4
13	A33G1184ABJ*	HINGE COVER	1

11. BOM List

Note: The parts information listed below are for reference only, and are subject to change without notice. Please go to http://cs.tpv.com.cn/hello1.asp for the latest information.

T9CMN26KAGACHNE

Location	Part No.	Description	Remark
	040G 58162435A	MANUAL P/N LABEL	
	052G 2191 A	PAPER TAPE	
	052G6019 1	INSULATING TAPE	
HDCP-SMT	070GHDCP500HDC	HDCP CODE	
E08902	089G 715HAAE01	SIGNAL CABLE	
E08901	089G402A15N HL	AC POWER CORD 1500mm	
E09504	095G8014 6DJ15	HARNESS 6P(A2008)-6P(CI1406S) 160mm	
	0D1G1030 6120	screw	
	0M1G 930 6 47 CR3	SCREW 3x6	
	0M1G1140 8120	SCREW 4x8	
	0Q1G 140 12120	SCREW 4X12	
	0Q1G 330 8120	SCREW	
E750	750GBM195FGK13N000	LCD M195FGE-L20 C1 NH CMI	
	A15G1586301J04	MAINFRAME	
	A33G1181ABJ 1L0100	KEY	
	A33G1182 1 1L0100	LENS_POWER	
	A33G1183ABJ 1L0100	STAND_TOP	
	A33G1184ABJ 1L0100	COVER_HINGE	
	A34G2530ABJ 1B0100	COVER_STAND	
	A34G2531AED01B0130	BASE	
	A37G0241013	HINGE 20	
	AM1G1740 10125	SCREW	
	H40G 001624 1A	CARTON LABEL BARCODE 1	
	H40G020N61558A	RATING LABEL e2050SW EPI	
	H40G045762413C	OTHER LABEL ---base PN LABEL	
	H44GA016101	CUSHION-T	
	H44GA016201	CUSHION-B	
	H44GA01661509A00HX	ARTWORK CARTON E2050SW 19.5	
	H70G21C161511A	CD MANUAL for 50s all Models	
	KEPCAHB5	KEY BOARD	
	PLPCCA321MHD2	POWER BOARD	
	Q34G7636AEDB1B0104	BEZEL	
	Q34G7637ABJ03K0130	REAR_COVER	
	Q40G000161515A	CARTON LABEL	
	Q45G990161940500BX	PROTECT BAG	
	Q50G 4 10	TIE (Y1900221)	
M05201	Q52G100202500A00JY	AL FOIL	
M05202	Q52G100204500A00JY	AL FOIL	
M05203	Q52G100204500A00JY	AL FOIL	
	Q52G1301024A0100YY	BIG CARTON TAPE FOR AOC 60MM	
	Q52G1801MNT160CFLT	INSULATING SHEET	
	Q52G6019 14	TAPE	
E09501	S95G179T30PE37	FFC CABLE 30P 175mm 1.0MM	
	H40G000261553A	TCO'05 EPA LABEL	
	756GHCCB0A50860001	MAIN BOARD-CBPCAN2A1H2	
SMTCA-U402	100GANMA00BW11	MCU ASSY-056G2233501	

CN402	033G3802 6B Y L	WAFER	
CN701	033G3802 9B Y L	CONN 2.0 9P	
CN408	033G801930F CH L	FFC CONN 1.0mm 30P R/A 34mm 6mm	
CN101	088G 35315FVCL	D-SUB CONN V/T 15P BLUE H=10.4	
CN102	088G 35424FVXH	DVI CONN V/T 24P WHITE	
X401	093G 2251BCEC	CRYSTAL S-F-12.000M-30-3030-2085-25	
	709G4502 HM001	COMSUPTIVE ASS'Y	
	H40G 45762429A	LABEL	
LED001	081G 12 1F GH	LED GREEN/YELLOW GHZYG603D2-5B	
CN001	095G820H 6TE10	HARNESS 6P(SANW)-6P(2008) 120mm	
	709G4747 HM001	COMSUPTIVE ASS'Y	
GND1	009G6005 1	GND TERMINAL	
U902	056G 139 9	IC EL817M(X) photocoupler DIP-4	
NR901	061G 5810X	NTCR 8R 20% 4W 8D2-14 MCS	
C908	063G107K474 6S	0.47UF +-10%	
C809	067G 415330 9K	EC 33UF 20% 100V ED 8*12	
C907	067G 42Z68015K	EC 68UF 20% 450V 12.5*50 2000 hr	
L901	073G 174 65 H2	LINE FILTER 30mH MIN	
L906	073G 253191 H	IND CHOKE 1.1uH DADON	
L801	073G 253214 DN	CHOKE COIL 47UH 10% LZ.CC013.G01 2.5A	
T901	080GL22T 3 S3	X'FMR 490UH 7% 4UH BCK-ER28-22210	
CN901	087G 501 48 DL	AC SOCKET 3PIN + 3 Hole	
BD901	093G 50460514	BRIDGE KBP306G-05 3A 800V KBP	
D901	093G 60335	DIODE SR515 5A/150V DO-201AD	
D909	093G 60519	DIODE SR560-MK23 5A/60V DO-27 SECOS	
D905	093G 60519	DIODE SR560-MK23 5A/60V DO-27 SECOS	
CN902	095G 825 9D905	HARNESS 9P(SCN) - 9P 80mm FQE100911I	
CN804	311GW200A06ABX	WAFER 2.0mm 6P	
D801A	393G0060A0400T	SCHOTTKY SR310-29 X0 3A 100V High£½6mm	
	705GHA57006	Q901 ASS"Y	
	709G4744 HM001	CONSUMPTIVE ASS'Y	
	H40G 45762429A	LABEL	
	Q55G 100625	TIN STICK_LOW ARGENTUM	
C702	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C433	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C716	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C705	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
R002	061G0603000 FF	RST CHIPR MAX0R01 1/10W FENGHUA	
R004	061G06031001FF	RST CHIPR 1 KOHM +-1% 1/10W FENGHUA	
R003	061G06032001FF	RST CHIP 2KOHM 1% 1/10W FENGHUA	
R001	061G06032001FF	RST CHIP 2KOHM 1% 1/10W FENGHUA	
Q901	057G 667941	MOSFET P0765ATF 7 650 TO-220F	
HS1	090G6064 1	HEAT SINK	
	0M1G 930 8120	SCREW 3x8	
	055G 23524	WELDING FLUX WITHOUT PB	
	Q51G 6 4509	GLUE_RTV	
	Q55G 100625	TIN STICK_LOW ARGENTUM	
U901	056G 379529	AC/DC CONVERTER IC LD7576AGR SOP-7	
U801	056G 700 11	LED DRIVER OZ9998BGN-A1-0-TR SOP-16	
Q801	057G 763 92	FET P8008HV 4A/80V SOP-8	
RJ801	061G0805000 JF	RST CHIPR 0 OHM +-5% 1/8W FENGHUA	
R804	061G0805100 JF	RST CHIPR 10 OHM +-5% 1/8W FENGHUA	

R916	061G08051002FT	RST CHIP 10K 1/8W 1%	
R806	061G0805102 JF	RST CHIPR 1K OHM +-5% 1/8W FENGHUA	
R907	061G0805102 JT	RST CHIPR 1K OHM +- 5% 1/8W TZAI YUAN	
R928	061G0805103 JF	RST CHIPR 10K OHM +-5% 1/8W FENGHUA	
R801	061G0805103 JF	RST CHIPR 10K OHM +-5% 1/8W FENGHUA	
R818	061G0805103 JF	RST CHIPR 10K OHM +-5% 1/8W FENGHUA	
R918	061G0805103 JT	RST 0805 10K 5% 1/8W	
R805	061G0805104 JT	RST CHIPR 100KOHM +- 5% 1/8W TZAI YUAN	
R807	061G0805109 JF	RST CHIPR 1 OHM +- 5% 1/8W FENGHUA	
R808	061G0805109 JF	RST CHIPR 1 OHM +- 5% 1/8W FENGHUA	
R810	061G08051202FT	RST CHIP 12K 1/8W 1%	
R815	061G0805164 JF	RST 0805 160K 5% 1/8W	
R920	061G0805202 JF	RST CHIPR 2KOHM +-5% 1/8W FENGHUA	
R919	061G0805221 JF	RST CHIPR 220 OHM +-5% 1/8W FENGHUA	
R803	061G0805304 JF	RST CHIPR 300KOHM +-5% 1/8W FENGHUA	
R802	061G0805304 JF	RST CHIPR 300KOHM +-5% 1/8W FENGHUA	
R809	061G08053303FT	RST CHIP 330K 1% 1/8W	
R905	061G0805471 JT	RST CHIPR 470OHM +-5% 1/8W TZAI YUAN	
R811	061G08055101FT	RST CHIP 5K1 1/8W 1%	
R925	061G08059101FF	RST CHIPR 9.1KOHM +-1% 1/8W FENGHUA	
R816	061G08059101FT	RST CHIP 9K1 1/8W 1%	
F801	061G1206000 JT	RST CHIPR MAX0R05 1/4W TZAI YUAN	
RJ803	061G1206000 JT	RST CHIPR MAX0R05 1/4W TZAI YUAN	
R917	061G1206100 JT	RST CHIPR 10 OHM +-5% 1/4W TZAI YUAN	
R814	061G12061009FF	RST CHIP 10 OHM 1% 1/4W FENGHUA	
R912	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R929	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R909	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R903	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R910	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R930	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R911	061G1206103 JF	RST CHIPR 10KOHM +-5% 1/4W FENGHUA	
R908	061G1206103 JT	RST CHIPR 10KOHM +-5% 1/4W TZAI YUAN	
R913	061G1206109 JT	RST CHIPR 1 OHM +-5% 1/4W TZAI YUAN	
R812	061G12062007FT	RST 1206 0.2R 1% 1/4W SMD12060R2	
R813	061G12062007FT	RST 1206 0.2R 1% 1/4W SMD12060R2	
R923	061G1206221 JT	RST CHIPR 220 OHM +-5% 1/4W TZAI YUAN	
R901	061G1206624 JF	RST CHIPR 620KOHM +-5% 1/4W FENGHUA	
R902	061G1206624 JF	RST CHIPR 620KOHM +-5% 1/4W FENGHUA	
R900	061G1206624 JF	RST CHIPR 620KOHM +-5% 1/4W FENGHUA	
R817	061G1206681 JT	RST CHIPR 680 OHM +-5% 1/4W TZAI YUAN	
C812	065G080510131J F	CAP CHIP 0805 100PF J 50V NPO	
C813	065G080510131J F	CAP CHIP 0805 100PF J 50V NPO	
C923	065G080510232K F	CAP 0805 1000PF 10% 50V X7R	
C914	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C906	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C803	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C815	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C802	065G080510332K Y	CAP CHIP 0805 10N 50V X7R +/-10%	
C915	065G080510332K Y	CAP CHIP 0805 10N 50V X7R +/-10%	
C924	065G080510432K F	CAP CHIP 0805 0.1UF K 50V X7R	
C814	065G080510432K F	CAP CHIP 0805 0.1UF K 50V X7R	

C926	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C912	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C807	065G080522432K Y	CAP CHIP 0805 220N 50V X7R +/-10%	
C806	065G080522432K Y	CAP CHIP 0805 220N 50V X7R +/-10%	
C804	065G080547432K T	CAP CHIP 0805 0.47UF K 50V X7R	
C811	065G080547432K T	CAP CHIP 0805 0.47UF K 50V X7R	
C810	065G080547432K T	CAP CHIP 0805 0.47UF K 50V X7R	
C808	065G120610171J Y	CAP 1206 100PF 5% 500V NP0	
C929	065G120622272K Y	CER 1206 2N2 500V X7R 10%	
C928	065G120622272K Y	CER 1206 2N2 500V X7R 10%	
C916	065G120622272K Y	CER 1206 2N2 500V X7R 10%	
C917	065G120622272K Y	CER 1206 2N2 500V X7R 10%	
	709G4744 HS001	CONSUMPTIVE ASS'Y	
SW003	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
SW004	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
SW005	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
SW001	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
SW002	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
E715	715G4747K02000001C	KEY PCB FR1 SS 135*11*1.6mm	
J810	095G 90 23	JUMP WIRE - -	
J811	095G 90 23	JUMP WIRE - -	
J812	095G 90 23	JUMP WIRE - -	
J813	095G 90 23	JUMP WIRE - -	
J814	095G 90 23	JUMP WIRE - -	
J815	095G 90 23	JUMP WIRE - -	
J901	095G 90 23	JUMP WIRE - -	
J902	095G 90 23	JUMP WIRE - -	
J903	095G 90 23	JUMP WIRE - -	
J904	095G 90 23	JUMP WIRE - -	
J905	095G 90 23	JUMP WIRE - -	
J906	095G 90 23	JUMP WIRE - -	
J907	095G 90 23	JUMP WIRE - -	
J909	095G 90 23	JUMP WIRE - -	
J910	095G 90 23	JUMP WIRE - -	
J921	095G 90 23	JUMP WIRE - -	
CN901	006G 31500	EYELET	
IC903	056G 158 10 T	DC/DC AS431AZTR-E1 150MA 40V TO-92	
Q904	057G 530503 T	2SD1207T	
R915	061G 17222052T TZ	RST CFR 22R 5% 1/4W	
R906	061G152M10452T SY	RST MOFR 100KOHM +-5% 2WS FUTABA	
R904	061G152M25152T SY	RST MOF 250R 5% 2W	
R924	061G152M47852T SY	RST MOFR 0.47 OHM +-5% 2WS FUTABA	
C911	065G 2K152 2T6921	CAP CER 1500pF K 2KV Y5P	
C805	065G250K1052HT	CAP CER 1UF 10% 25V X7R	
C902	065G305M1023WR	CAP Y2 1NF 20% 250V Y5U	
C903	065G305M1023WR	CAP Y2 1NF 20% 250V Y5U	
C900	065G306M22233R	CAP Y1 2.2NF 20% 250V Y5U	
C927	065G500K4732HT	CAP CER 47NF 10% 50V X7R	
C816	065G517K102 2T6921	CAP CER 1000PF K 500V Y5P	
C920	067G 2046812KT	CAP CS 680UF 20% 10V 8*11 3900mA GP1A6	
C801	067G215D3314KT	EC 330UF 20% 25V 10*12 ED	
C913	067G215Y4707KT	EC 47uF 20% 50V 6.3*11mm EG	

FB801	071G 55 29	FERRITE BEAD	
FB802	071G 55 29	FERRITE BEAD	
FB901	071G 55 29	FERRITE BEAD	
FB902	071G 55 29	FERRITE BEAD	
FB903	071G 55 29	FERRITE BEAD	
F902	084G 56 4 B	FUSE 4A 250V	
F901	084G 56 4 B	FUSE 4A 250V	
ZD901	093G 39A6852T	ZENER MTZJ22B 21.51V 0.5W DO-35	
D903	093G 6026T52T	CTIFIER DIODE FR107	
D907	093G 6452452T	SWITCHING 1N4148-B4006 0.2A 100V DO-35	
J808	095G 90 23	JUMP WIRE - -	
J807	095G 90 23	JUMP WIRE - -	
J806	095G 90 23	JUMP WIRE - -	
J805	095G 90 23	JUMP WIRE - -	
J804	095G 90 23	JUMP WIRE - -	
J803	095G 90 23	JUMP WIRE - -	
J802	095G 90 23	JUMP WIRE - -	
J801	095G 90 23	JUMP WIRE - -	
J809	095G 90 23	JUMP WIRE - -	
J908	095G 90 23	JUMP WIRE - -	
C922	367G415X4713AT	EC 470uf 20% 16V 10X13 RS	
C918	367G415X6814AT	EC 680uf 20% 25V 10x20 RS	
	709G4744 HA001	CONSUMPTIVE ASS'Y	
E715	715G4744P01003001C	PWR PCB FR1 SS 193X132+1.6(mm)	2nd source
E715	715G4744P01003001M	PWR PCB FR1 SS 193*132*1.6mm	
D904	093G 6026T52T	CTIFIER DIODE FR107	
U401	056G 562368	SCALER NT68660FG/B TQFP-100	
U701	056G 563515	LDO AZ1117D-3.3TR/E1 1A/3.3V TO-252	
U104	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U107	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U106	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U103	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U102	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U101	056G1133 34 1	EEPROM M24C02-RMN6TP 2Kb SO-8	
U105	056G1133 34 1	EEPROM M24C02-RMN6TP 2Kb SO-8	
U402	056G2233501	FLASH MX25L2026DM1I-12G 2Mb SOP-8	
Q401	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	
Q402	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	
Q706	057G 417518	TRA LMBT3904LT1G 200mA/40V SOT-23 LRC	
Q701	057G 417518	TRA LMBT3904LT1G 200mA/40V SOT-23 LRC	
Q705	057G 763940	MOSFET AO3401A SOT-23	
R453	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R410	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R409	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R407	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R406	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R118	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R117	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R110	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R109	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R104	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	
R103	061G0402000 JT	RST 0402 0.05R MAX 1/16W -	

R141	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R140	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R139	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R138	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R137	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R136	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R135	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R134	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R123	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R124	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R127	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R128	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R129	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R431	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R434	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R439	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R703	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R121	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R119	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R113	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R111	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R108	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R106	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R105	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R102	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R101	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R488	061G0402102 JT	RST CHIP 1K 1/16W 5% TZAI YUAN	
R487	061G0402102 JT	RST CHIP 1K 1/16W 5% TZAI YUAN	
R424	061G0402102 JT	RST CHIP 1K 1/16W 5% TZAI YUAN	
R130	061G0402102 JT	RST CHIP 1K 1/16W 5% TZAI YUAN	
R425	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R427	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R429	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R444	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R704	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R714	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R799	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R715	061G0402104 JT	RST CHIP 100K 1/16W 5% TZAI YUAN	
R422	061G0402104 JT	RST CHIP 100K 1/16W 5% TZAI YUAN	
R415	061G0402104 JT	RST CHIP 100K 1/16W 5% TZAI YUAN	
R432	061G0402105 JT	RST CHIP R 1Mohm 1/16W +/-5% TZAI YUAN	
R125	061G0402222 JT	RST CHIP 2K2 1/16W 5% TZAI YUAN	
R126	061G0402222 JT	RST CHIP 2K2 1/16W 5% TZAI YUAN	
R411	061G0402222 JT	RST CHIP 2K2 1/16W 5% TZAI YUAN	
R413	061G0402222 JT	RST CHIP 2K2 1/16W 5% TZAI YUAN	
R719	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R701	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R454	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R133	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R116	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R416	061G0402224 JT	RST CHIP 220K 1/16W 5% TZAI YUAN	
R423	061G0402224 JT	RST CHIP 220K 1/16W 5% TZAI YUAN	

R405	061G0402392 JT	RST CHIP R 3K9 +/-5% 1/16W TZAI YUAN	
R404	061G0402392 JT	RST CHIP R 3K9 +/-5% 1/16W TZAI YUAN	
R401	061G0402392 JT	RST CHIP R 3K9 +/-5% 1/16W TZAI YUAN	
R419	061G0402394 JF	RST CHIP R 390K +/-5% 1/16W FENGHUA	
R408	061G04024700FT	RST CHIP 470R 1/16W 1%	
R142	061G0402471 JT	RST CHIP 470R 1/16W 5% TZAI YUAN	
R721	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R702	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R132	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R131	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R115	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R114	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R107	061G0402750 JT	RST 0402 75R 5% 1/16W	
R112	061G0402750 JT	RST 0402 75R 5% 1/16W	
R120	061G0402750 JT	RST 0402 75R 5% 1/16W	
R122	061G0603000 JT	RST CHIP MAX 0R05 1/10W TZAI YUAN	
R417	061G0603331 JT	RST 0603 330R 5% 1/10W	
R418	061G0603471 JT	RST CHIPR 470OHM +-5% 1/10W TZAI YUAN	
FB701	061G0805000 JT	RST 0805 0.05R MAX 1/8W	
R726	061G0805000 JT	RST 0805 0.05R MAX 1/8W	
R448	061G1206301 JT	RST CHIPR 300 OHM +-5% 1/4W TZAI YUAN	
R449	061G1206301 JT	RST CHIPR 300 OHM +-5% 1/4W TZAI YUAN	
C120	065G040210232K T	CAP CHIP 0402 1000pF 50V X7R	
C415	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C417	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C418	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C419	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C422	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C424	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C425	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C427	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C434	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C701	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C703	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C704	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C706	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C718	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C113	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C114	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C115	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C117	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C118	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C119	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C402	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C403	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C405	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C408	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C409	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C410	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C411	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C412	065G040210412K Y	CAP 0402 100NF 10% 16V X7R	
C414	065G0402105A5K Y	NO-SUGGEST CAP 0402 1UF 10% 10V X5R	

C428	065G040222031J Y	CAP CHIP 0402 22P 50V NP0 +/-5%	
C426	065G040222031J Y	CAP CHIP 0402 22P 50V NP0 +/-5%	
C182	065G040222031J Y	CAP CHIP 0402 22P 50V NP0 +/-5%	
C181	065G040222031J Y	CAP CHIP 0402 22P 50V NP0 +/-5%	
C101	065G040222415K T	CAP CHIP 0402 220nF K 16V X5R	
C116	065G040222415K T	CAP CHIP 0402 220nF K 16V X5R	
C429	065G040222415K T	CAP CHIP 0402 220nF K 16V X5R	
C715	065G040222415K T	CAP CHIP 0402 220nF K 16V X5R	
C110	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C108	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C107	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C105	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C104	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C102	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C103	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C106	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C109	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C423	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C421	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C416	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C413	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C404	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C401	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
FB407	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB409	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB404	071G 56V301 M	CHIP BEAD 0805 300R 25% 700mA	
FB405	071G 56V301 M	CHIP BEAD 0805 300R 25% 700mA	
FB408	071G 56V301 M	CHIP BEAD 0805 300R 25% 700mA	
ZD101	093G 39GA01 T	RLZ5.6B	
ZD102	093G 39GA01 T	RLZ5.6B	
D101	393G006404200P00HF	HF BAV70_R1_00001 0.5A 100V SOT-23	
D102	393G006404200P00HF	HF BAV70_R1_00001 0.5A 100V SOT-23	
	709G4502 HS001	COMSUPTIVE ASS'Y	
E715	715G4502M01000004C	MAIN PCB FR4 DS 80X72+1.6(mm)	2nd source
E715	715G4502M01000004I	MAIN PCB FR4 DS 80X72X1.6MM	
	H52G1701 1	MESH PRINTTING_PAPER	